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NOVEMBER 9, 1946

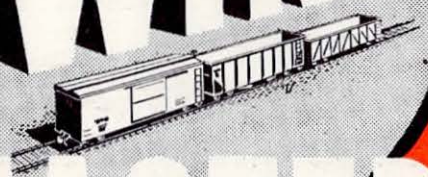
Editorial Contents, page 25

Railway Age

Founded in 1856

UNIFORM HOPPER DOOR ADJUSTMENT

WINE



MASTER DOOR LOCKS

THE WINE RAILWAY APPLIANCE CO. TOLEDO 9, OHIO

RSMA

EXHIBIT CONVENTION

to be held in

CONVENTION HALL

ATLANTIC CITY

JUNE 23 to 28, 1947

in conjunction with meetings of the

MECHANICAL DIVISION

and

PURCHASES & STORES DIVISION

of the

ASSOCIATION OF AMERICAN RAILROADS

FOR PARTICULARS ADDRESS

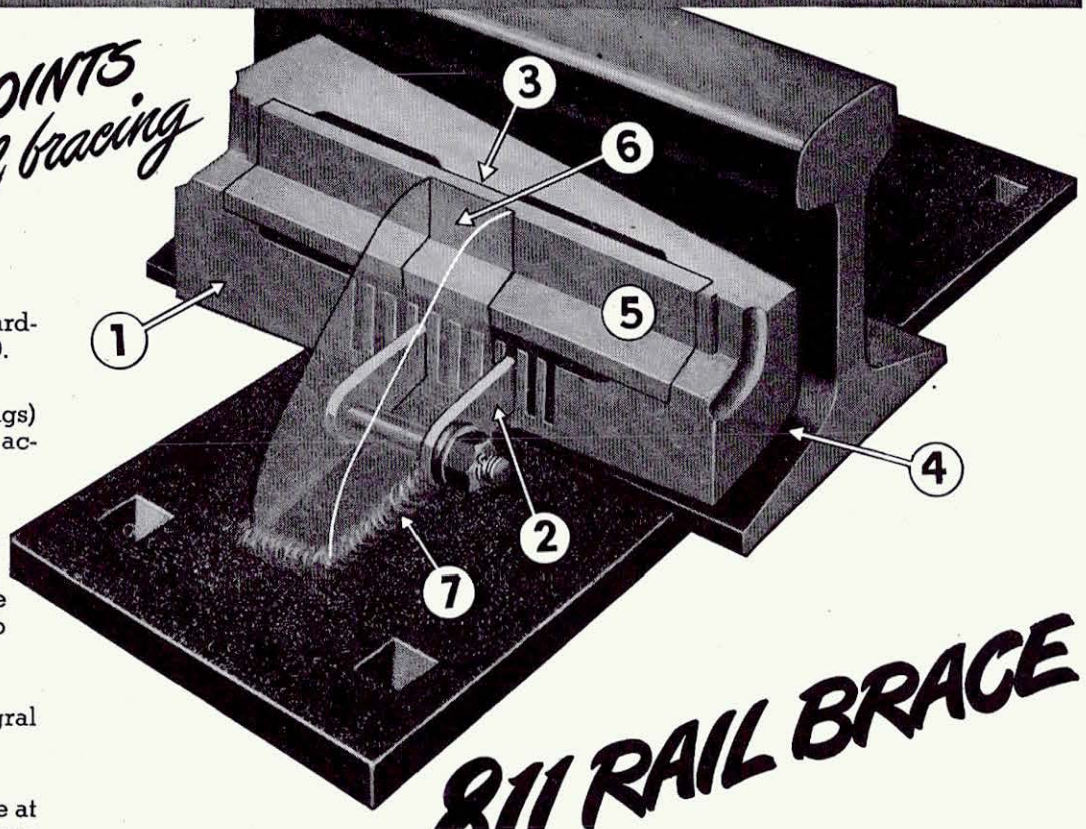
THE RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION

KEENAN BUILDING • PITTSBURGH 22, PA.

JOHN D. CONWAY, *Secretary*

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 50 cents each. Vol. 121, No. 19.

The WEDGE for *Tightness*
The SPRING for *"Give"*



These 7 POINTS mean real bracing

1 Wedge. Brinell hardness of about 400.

2 Two pawls (forgings) with synchronized action.

3 Compression stop.

4 Contours of wedge fit base and web of rail.

5 Steel spring, integral with wedge.

6 Thick, heavy brace at right angles to plane of contacting surface.

7 Switch plate and brace welded together.

811 RAIL BRACE

Bethlehem's 811 Rail Brace is a simple device that presents no installation problems. Yet, despite its simplicity, this heavy-duty brace has many features that are real trouble-savers.

One is the wedge, a heat-treated forging that lies snugly against the rail flange and web. It is easily adjustable to provide a tight, rigid fit and compensate for differences in rails. Synchronized pawls on the brace engage slots in the wedge . . . so that it always "stays put."

Another feature, providing for resiliency and recovery from side thrust, is the rugged steel spring. This piece is integral with the wedge proper. It will withstand a compression force of at least 20,000 pounds.

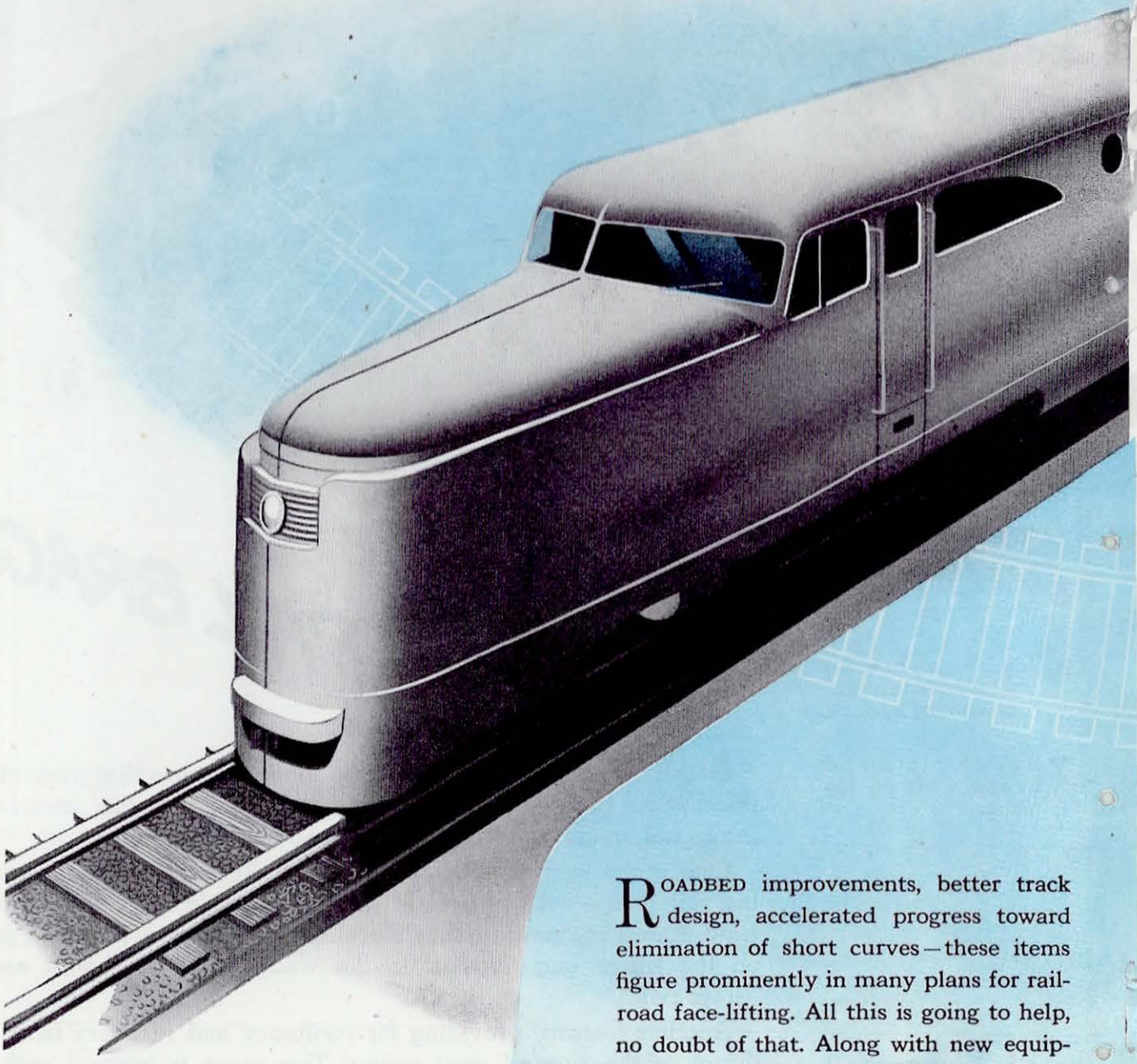
Here's a brace that combines exceptional strength with a definite cushioning action. For further details, write Bethlehem Steel Company, Bethlehem, Pa., or the nearest District Office.

BETHLEHEM STEEL

Certainly, better track design, and easier curves

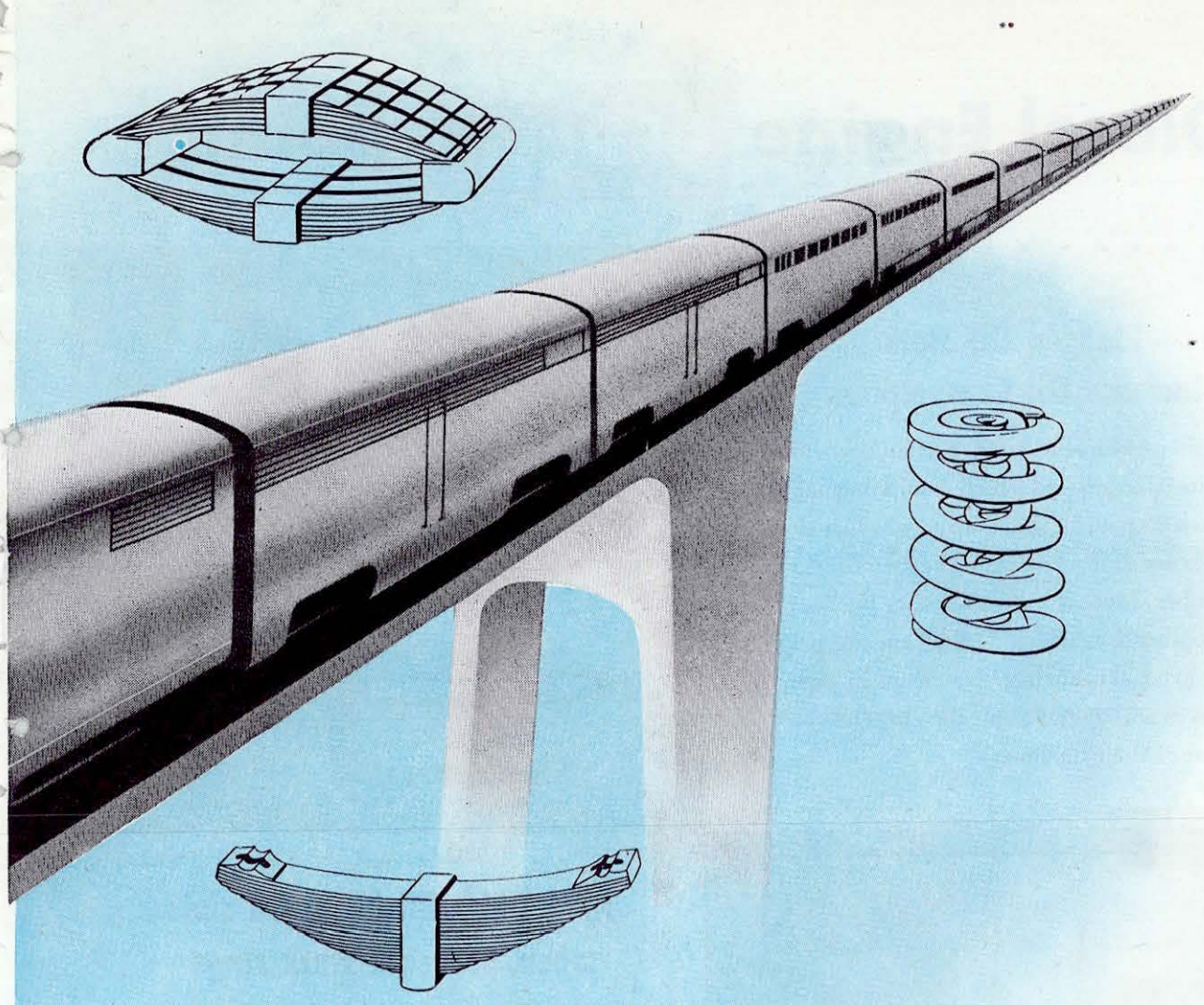
are important, but... **Remember that—**

Railroad Popularity Rides On Springs!



ROADBED improvements, better track design, accelerated progress toward elimination of short curves—these items figure prominently in many plans for railroad face-lifting. All this is going to help, no doubt of that. Along with new equipment it is going to do considerable toward providing a smoother, faster, safer ride for passengers and shipments.

That is—it will if the SPRINGS on your new equipment are right. Otherwise, no



track improvements any railroad can finance can do much to help railroads compete against other railroads or alternative means of transport.

Fundamentally, today and always, *railroad popularity rides on springs.*

RAILWAY STEEL SPRINGS have proved, are proving, and will continue to prove their fitness to deserve and retain the confidence of the industry in this vital issue.

American Locomotive

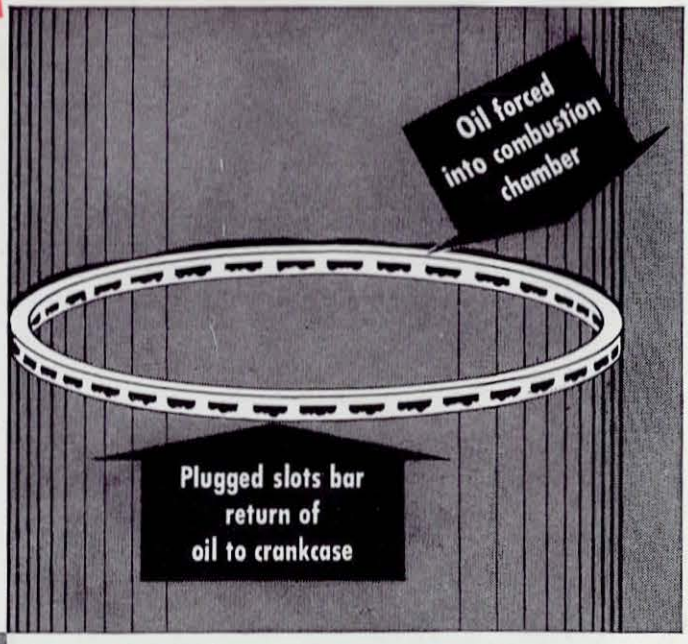
Alco

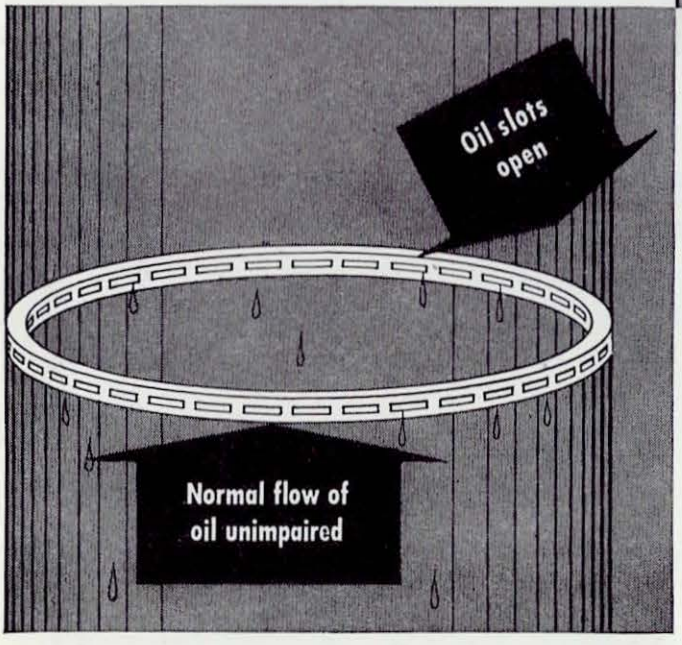
THE MARK OF MODERN LOCOMOTION

Diesel Engine DANGER points

Plugged Oil Slots Increase Oil Consumption

When carbon and gum formations clog oil-ring slots, the oil which would normally return through these apertures to the crankcase is forced into the combustion chamber. Here it joins the other products of combustion which "coke" on the ring belt area cementing the rings in their grooves and aggravating the clogged condition of the ring slots.





RPM DELO Oil keeps oil slots open, prevents stuck rings

RPM DELO Diesel Engine Lubricating Oil is compounded to prevent engine deposits these three ways:

1. An oxidation inhibitor reduces the formation of gummy particles which form the binder for carbon deposits.
2. A detergent prevents deposits forming on rings and pistons, keeping engines cleaner.
3. A dispersive agent insures removal of this material when the oil is drained.

Other compounds in RPM DELO Oil minimize hot-spot wear, prevent corrosion, eliminate foaming.

To match the fine performance of RPM DELO OIL, use these equally efficient companion products from the same famous "RPM" line—RPM HEAVY DUTY MOTOR OIL —RPM COMPOUNDED MOTOR OIL—RPM GEAR OILS AND LUBRICANTS—RPM GREASES. For additional information or name of your distributor, write any of the companies below:

STANDARD OF CALIFORNIA • 225 Bush St., San Francisco 20, California
THE CALIFORNIA COMPANY • 17th and Stout Streets, Denver 1, Colorado
STANDARD OIL COMPANY OF TEXAS • El Paso, Texas
THE CALIFORNIA OIL COMPANY • 30 Rockefeller Plaza, New York 20

DIESEL ENGINE RPM DELO LUBRICATING OIL

ALL-ROUND PERFORMANCE

One thing's sure! Easy-riding Ride-Control Trucks cut operating costs *all* ways.

Ride-Control spring action protects *lading—saves wear and tear* on rolling stock and roadbed. And better "tracking" is the answer to *today's* speed needs.

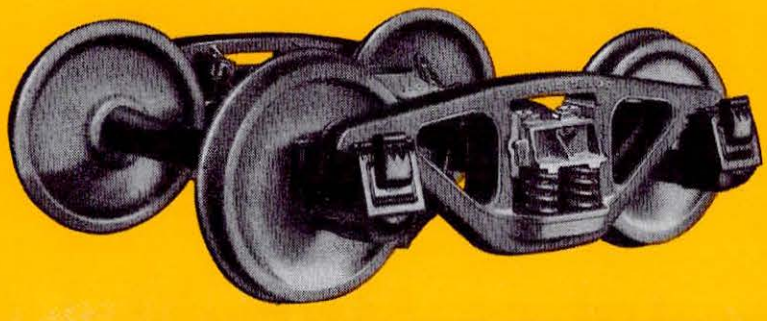
The gentle ride that lading gets saves money in damage claims. *That's true.* But trucks on more than 20% of all orders have been used where protection of *rolling stock and roadbed* is the primary consideration—on flats, gondolas, open and covered hoppers, and tank cars.

Ride-Control Trucks are an excellent investment in operating economy, *whatever* the type of car; whatever the load and speed.

A·S·F *Ride-Control* TRUCK

NO SPRING PLATES • NO SPRING PLANKS

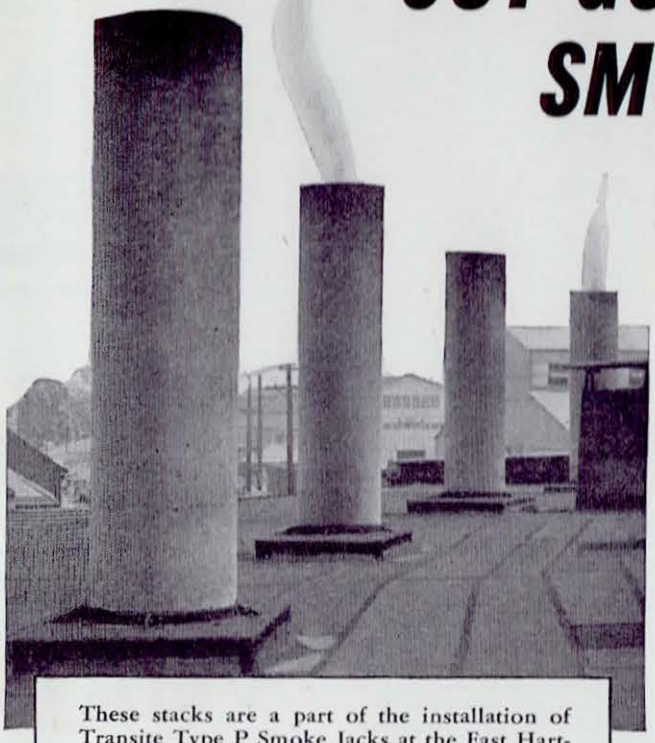
LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL



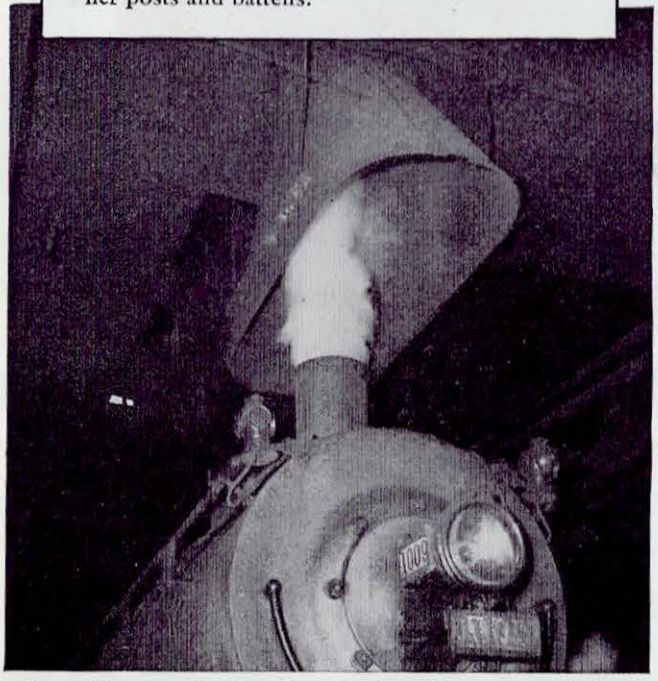
AMERICAN STEEL FOUNDRIES

MINT-MARK OF ⬡ FINE CAST STEEL

OUT GO SMOKE-VENTING PROBLEMS with J-M Transite Smoke Jacks



These stacks are a part of the installation of Transite Type P Smoke Jacks at the East Hartford, Conn., roundhouse of the New York, New Haven and Hartford Railroad. Note the one-piece construction and absence of all fastenings, corner posts and battens.



Above: The hood of the Transite Type P Smoke Jack is so constructed that the corner pieces are quadrants of Transite Pipe joined lengthwise and at sides with flat Transite. This design affords maximum strength and economical erection.

There's no smoke-venting problem here—with J-M Transite Smoke Jacks to clear the air!

10 years ago Transite Type P Smoke Jacks were installed in the busy roundhouse of the New York, New Haven and Hartford Railroad at East Hartford, Conn. They are still in service today . . . carrying off smoke and fumes from locomotive stacks, keeping the roundhouse free of gases. No maintenance has been required.

The long useful life you can expect from Johns-Manville Transite Type P Smoke Jacks is due largely to two things—

FIRST, because they are made of asbestos and cement, they have unusual corrosion-resistance and durability.

SECOND, they are designed for roundhouse smoke disposal with a minimum number of parts, and a one-piece stack in which all fastenings, corner posts and battens are eliminated.

For complete information, write Johns-Manville at New York, Chicago, Cleveland, St. Louis, or San Francisco.

JOHNS-MANVILLE JM PRODUCTS

Johns-Manville

88 YEARS OF SERVICE TO TRANSPORTATION

We wish it were this easy!

If you know a magician who specializes in freight cars, please tell him he's wanted by the railroads! The unprecedented demand for cars to move this year's record-breaking grain and other crops still continues — other demands for cars are considerably greater than a year ago. As a result there just aren't quite enough cars to go around.

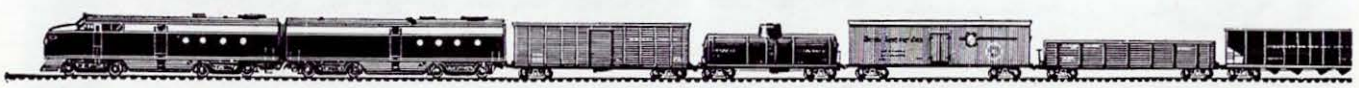
You see, wartime service took a heavy toll of freight cars, while wartime restrictions made it impossible to get all the new cars we needed. Railroads have 50,000 new cars on order, but shortages of materials and disturbances in production have held up deliveries. We still haven't enough new cars to replace those worn out carrying wartime traffic.

Railroads are calling upon all their experience to speed up the handling of cars and the movement of trains. They have been moving about 150,000 loaded cars a day — furnishing 90% of the freight cars ordered.

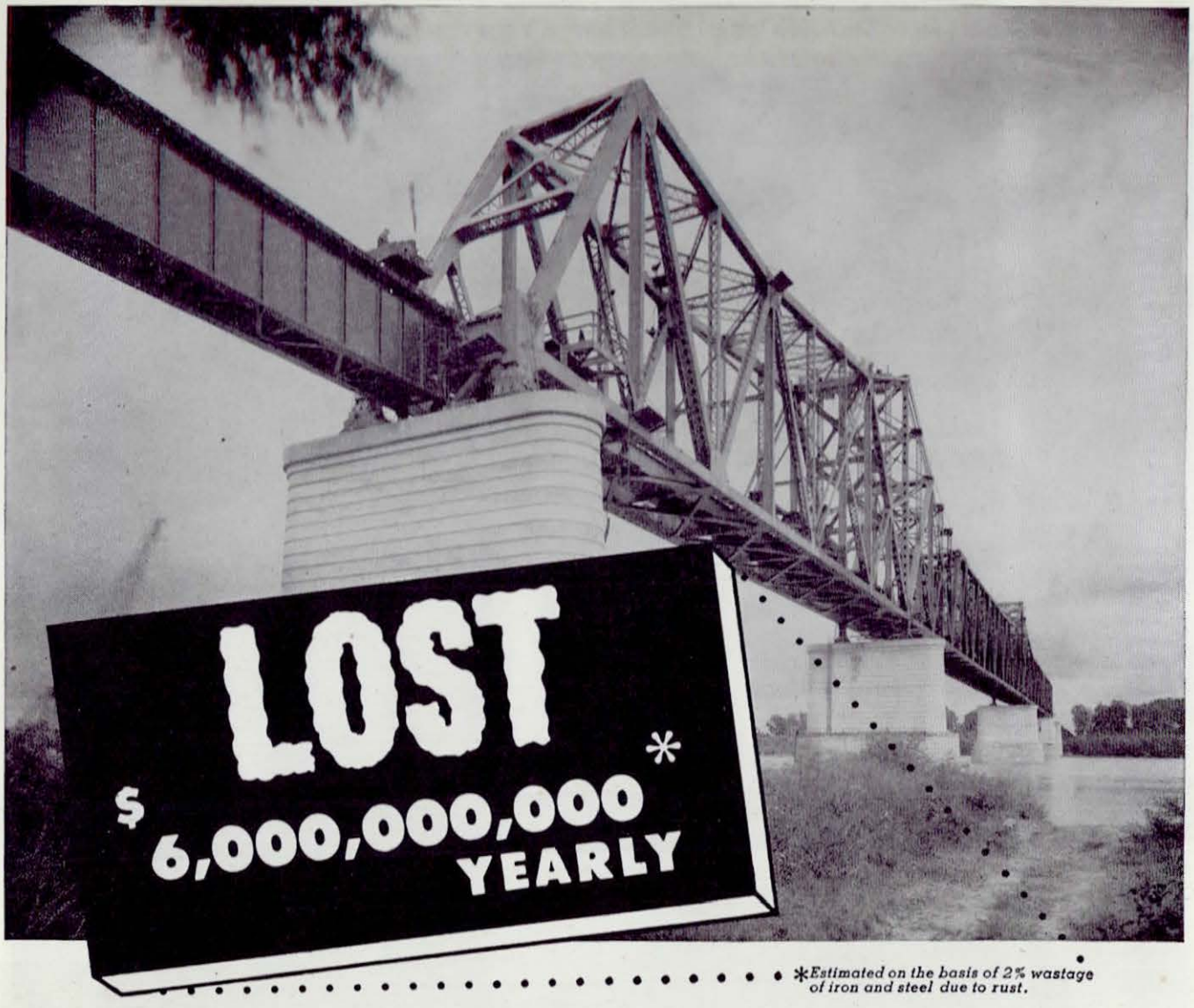
Industries are helping to meet this serious situation by re-establishing the wartime practice of loading and unloading freight cars promptly — six full days every week.

Working together in this way, the railroads and the shippers will surely be able to meet the transportation needs of the nation.

ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D. C.



IN PARTNERSHIP WITH ALL AMERICA



*Estimated on the basis of 2% wastage of iron and steel due to rust.

You pay a share of this tremendous loss, if you fail to protect iron and steel surfaces from the metal-consuming "fire" of rust.

RUST-OLEUM STOPS RUST!

For less than a cent per square foot material cost, you can add years of life to bridges, signal equipment, water tanks, rolling stock and other property. RUST-OLEUM will positively stop and prevent rust. It penetrates surface rust and incorporates it within the protective film—a water-tight, air-proof, rust-inhibiting coating that does not crack, blister or peel.

EASY TO USE . . .
LASTING PROTECTION

APPLY BY BRUSH, DIP OR SPRAY

RUST-OLEUM SAVES LABOR 3-Ways!

1. IT Costs Preparation Time!
No sandblasting or chemical cleaners are necessary. Wirebrushing removes paint scale or blisters, dirt, etc.

2. IT Goes On Faster!
Rust-Oleum saves 25% of the time ordinarily required for the application and covers 30% more area than ordinary material—*an important saving.*

3. IT Lasts Longer!
As a protective coating, Rust-Oleum outlasts paint two to ten times on most jobs. This means *extra* savings.

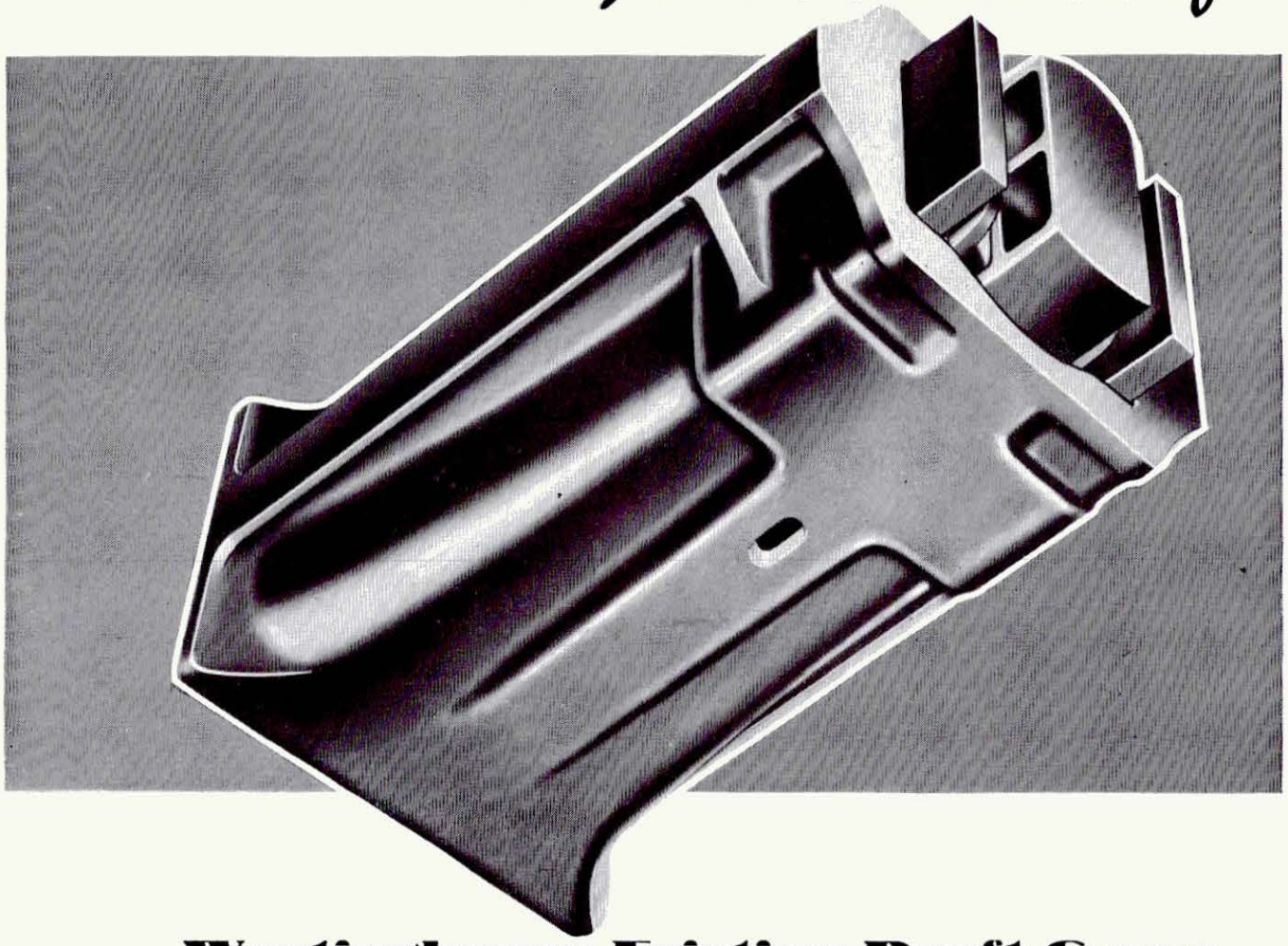
Get the facts—NOW! Write today for Catalog No. 145 for recommended applications.

RUST-OLEUM CORPORATION

2415 Oakton Street • Evanston, Illinois

Complete Protection

. . . From Coupler to Coupler
. . . From Rail to Roof!



Westinghouse Friction Draft Gears

Absorb and Dissipate Shocks at the Couplers

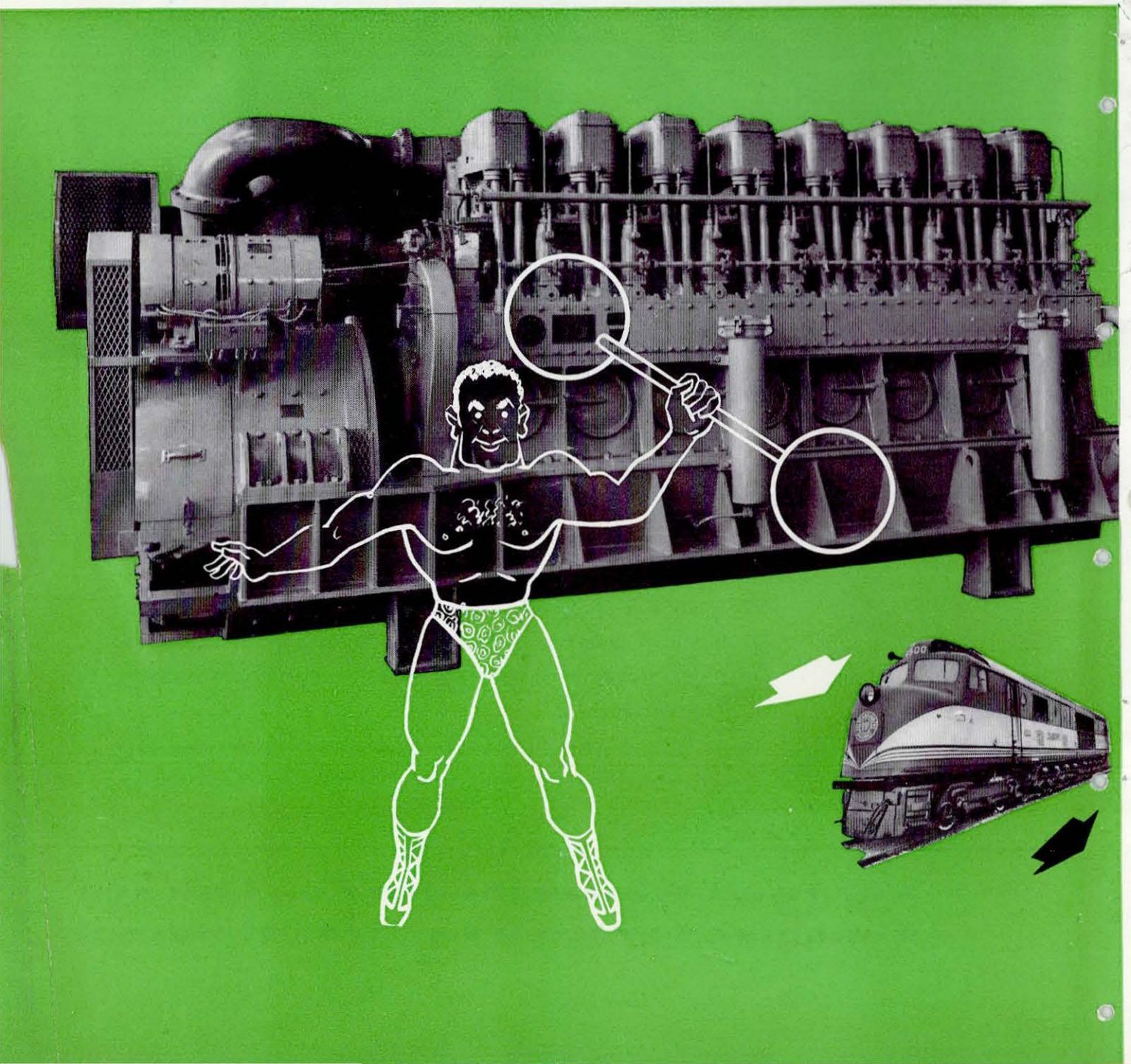
Modern Friction Draft Gears are, and continue to be, an evolution of design and experience resulting in developments which have more than kept pace with the unparalleled progress of Railroading.

Over 98% of the cars in freight carrying service are A.A.R. construction, and over 96% have Friction Draft Gears.

2004

Cardwell Westinghouse Co., Chicago
Canadian Cardwell Co., Ltd., Montreal

this power plant is



"beefed-up" for unusual performance

This power unit is one of the pair that makes the Baldwin-Westinghouse 3000-hp. Diesel-Electric the most powerful single-cab locomotive now riding the rails.

The improved Baldwin Diesel engine is slow-speed, minimizing wear and tear and reducing maintenance. Supercharging packs in extra power, and also provides extra cooling effect on the cylinder head, walls, valves and pistons.

The Westinghouse generating equipment is big enough to provide full power for traction over the entire operating speed range, with plenty of reserve for auxiliaries. Power is immediately available . . . there's no wait for field build-up.

This modern power plant is only one of a number of advanced features that the pooled experience and engineering brains of two great companies have built into new Diesel-Electric locomotives. A representative will be glad to discuss details of how Baldwin-Westinghouse Diesel-Electrics can help you to carry out *your* transportation plans for tomorrow.

The Baldwin Locomotive Works, Philadelphia 42, Pa., U. S. A. Offices: Philadelphia, New York, Chicago, St. Louis, Washington, Boston, San Francisco, Cleveland, Detroit, Pittsburgh, Houston, Birmingham, Norfolk, Seattle.

The first of the new 3000-hp. units has already "shown its muscle" on the Seaboard Air Line Railway. A number of other important roads have units on order, or under consideration.

THE **BALDWIN-**
LOCOMOTIVE WORKS, PHILADELPHIA

BLW THE BALDWIN GROUP

EXECUTIVES:

How Good a Salesman are YOU?

TEST YOURSELF WITH THIS PRODUCT—

Guaranteed to Please Every Customer

CHECK HERE how many of your employees are buying U.S. Savings Bonds regularly

HERE'S HOW YOU RATE according to national averages

- ☐ **90%** or more ➡ No one needs to tell you anything about selling.
- ☐ **80%** or more ➡ Excellent.
- ☐ **70%** or more ➡ Not bad. Just apply a little more effort.
- ☐ **60%** or less ➡ This wasn't a high mark in school, either.

The "PRODUCT"—U. S. Savings Bonds—is easy to sell, because it offers every prospect a guaranteed means of making money. Each unit can produce $4 for every $3 of purchase price.

The MARKET consists of all your employees. It is an eager market, as shown by surveys—which indicate that 85% of all participants in the Payroll Savings Plan want the plan continued.

The REWARD is twofold: By helping your employees build personal security, you help assure that they will be happier, more stable—more productive on the job. And you help *all* of us, including yourself, because every Bond you sell helps to check inflationary tendencies.

Are You Using These Booklets?

If not, or if you wish additional copies, just ask your State Director of the Treasury Department Savings Bonds Division.

THE PEACETIME PAYROLL SAVINGS PLAN—A booklet, published for key executives by the Treasury Department, containing helpful suggestions on the conduct of your payroll savings plan for U.S. Savings Bonds.

THIS TIME IT'S FOR *YOU*—A booklet for employees . . . explaining graphically how the payroll savings plan works . . . goals to save for, and how to reach them with Savings Bonds.

The Treasury Department acknowledges with appreciation the publication of this message by

RAILWAY AGE

This is an official U. S. Treasury advertisement prepared under the auspices of the Treasury Department and The Advertising Council

The "log" of a 44-tonner

OWNER: C., St. P., M. & O.

ENGINES: Two dependable D17000 "Caterpillar" Diesels.

SERVICE HOURS TO DATE: 9885 in 31 months.

TIME LOST DUE TO ENGINE FAILURE: Practically nil.

REPLACEMENTS: One set of liners, rings, rod bearings.

OPERATING SCHEDULE: Around the clock.

FUEL CONSUMPTION: 91 gals. average per 24 hours.

"BOUQUET": Operators say it is the most reliable and by far the best Diesel locomotive they have in the yards.

(Item of added interest: More than 90% of the 44-tonners operating on class railroads in the Western Hemisphere are powered by "Caterpillar" Diesels.)

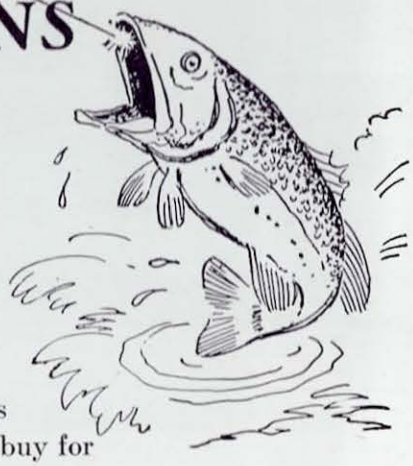
CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

CATERPILLAR DIESEL

REG. U.S. PAT. OFF.

ENGINES • TRACTORS
MOTOR GRADERS
EARTHMOVING EQUIPMENT

What a Railway Purchaser should know about *FINS*



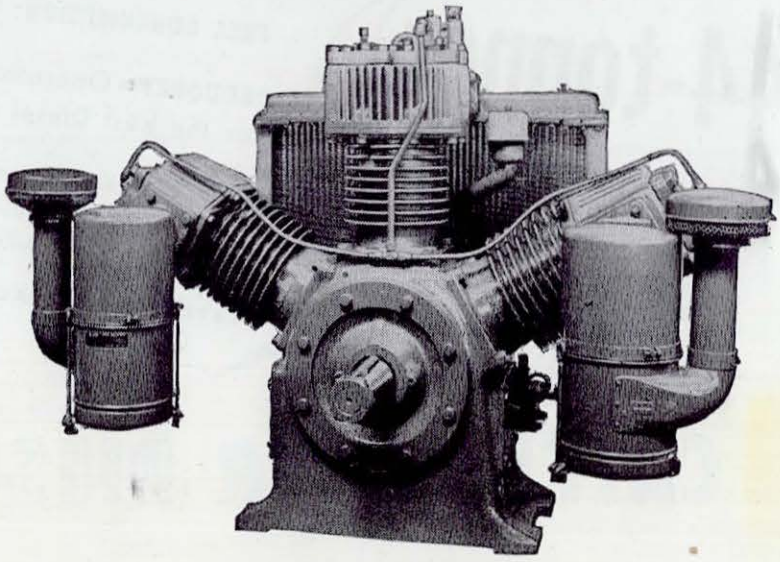
To keep efficient, an air-cooled compressor must stay *cool*. And there's where fins come in. For Gardner-Denver WXE Air-Cooled Compressors have extra large and heavy circumferential cooling fins. These fins make possible a better dissipation of heat. They eliminate cylinder distortion. They provide extra strength.

Better cooling fins are only one of the features which make these WXE Compressors a better buy for railroads. For example, the crankshafts of these compressors are mounted on Timken tapered roller main bearings. The drop forged crankshaft has integral counterweights to assure smooth-running operation. The valves are *cushioned* duo-plate valves—built for long service and minimum breakage.

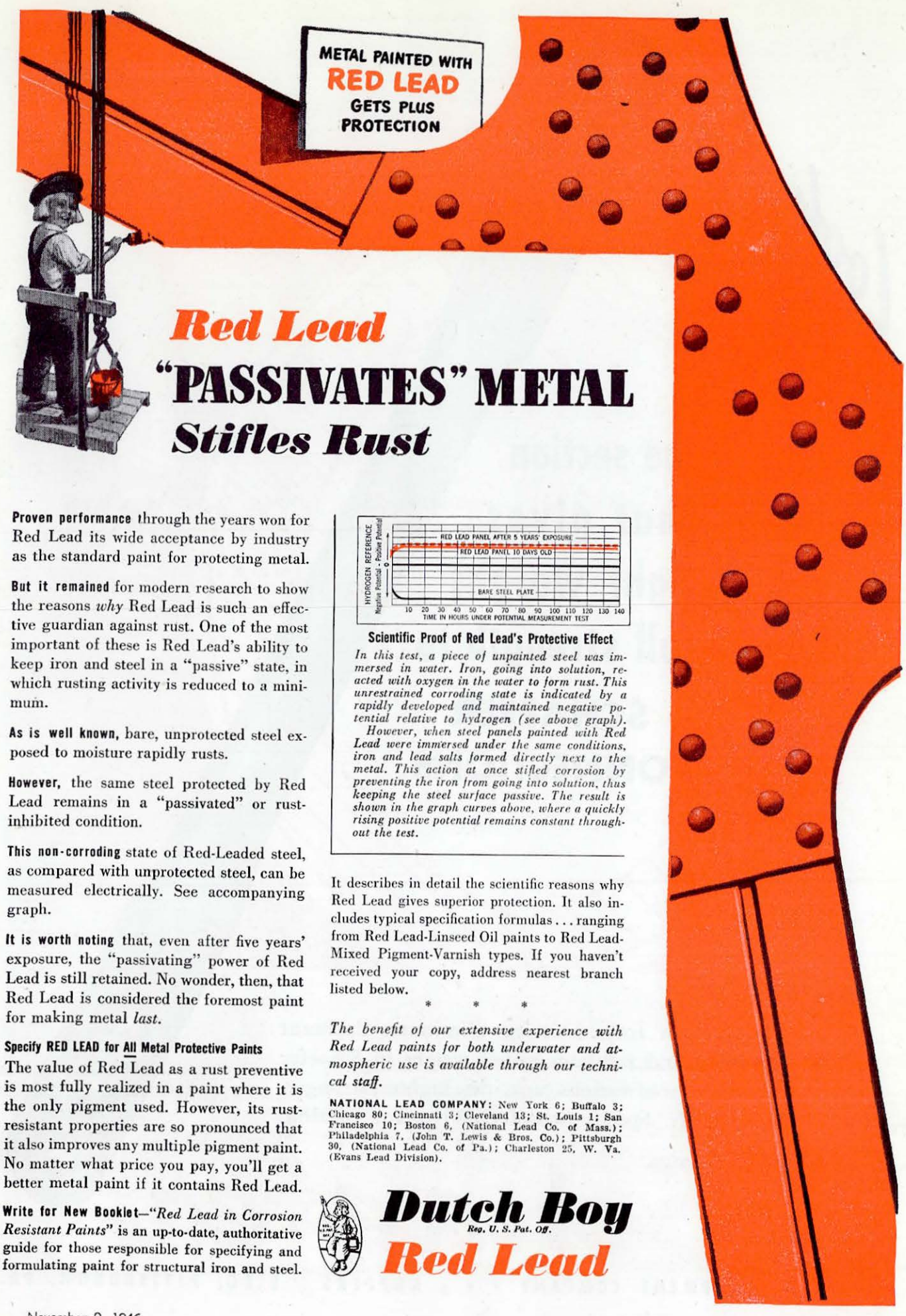
Let us tell you more about Gardner-Denver WXE Compressors for service on Diesel electric locomotives—for signal and switch service—in yards, shops and power plants. Write Gardner-Denver Company, Quincy, Illinois.

GARDNER-DENVER

Since 1859



Gardner-Denver WXE Compressor on Diesel Locomotive



Red Lead "PASSIVATES" METAL *Stifles Rust*

Proven performance through the years won for Red Lead its wide acceptance by industry as the standard paint for protecting metal.

But it remained for modern research to show the reasons *why* Red Lead is such an effective guardian against rust. One of the most important of these is Red Lead's ability to keep iron and steel in a "passive" state, in which rusting activity is reduced to a minimum.

As is well known, bare, unprotected steel exposed to moisture rapidly rusts.

However, the same steel protected by Red Lead remains in a "passivated" or rust-inhibited condition.

This non-corroding state of Red-Leaded steel, as compared with unprotected steel, can be measured electrically. See accompanying graph.

It is worth noting that, even after five years' exposure, the "passivating" power of Red Lead is still retained. No wonder, then, that Red Lead is considered the foremost paint for making metal *last.*

Specify RED LEAD for All Metal Protective Paints

The value of Red Lead as a rust preventive is most fully realized in a paint where it is the only pigment used. However, its rust-resistant properties are so pronounced that it also improves any multiple pigment paint. No matter what price you pay, you'll get a better metal paint if it contains Red Lead.

Write for New Booklet—"*Red Lead in Corrosion Resistant Paints*" is an up-to-date, authoritative guide for those responsible for specifying and formulating paint for structural iron and steel.

HYDROGEN REFERENCE
Negative Potential - Positive Potential
0
RED LEAD PANEL AFTER 5 YEARS' EXPOSURE
RED LEAD PANEL 10 DAYS OLD
BARE STEEL PLATE
10 20 30 40 50 60 70 80 90 100 110 120 130 140
TIME IN HOURS UNDER POTENTIAL MEASUREMENT TEST

Scientific Proof of Red Lead's Protective Effect

In this test, a piece of unpainted steel was immersed in water. Iron, going into solution, reacted with oxygen in the water to form rust. This unrestrained corroding state is indicated by a rapidly developed and maintained negative potential relative to hydrogen (see above graph).

However, when steel panels painted with Red Lead were immersed under the same conditions, iron and lead salts formed directly next to the metal. This action at once stifled corrosion by preventing the iron from going into solution, thus keeping the steel surface passive. The result is shown in the graph curves above, where a quickly rising positive potential remains constant throughout the test.

It describes in detail the scientific reasons why Red Lead gives superior protection. It also includes typical specification formulas . . . ranging from Red Lead-Linseed Oil paints to Red Lead-Mixed Pigment-Varnish types. If you haven't received your copy, address nearest branch listed below.

* * *

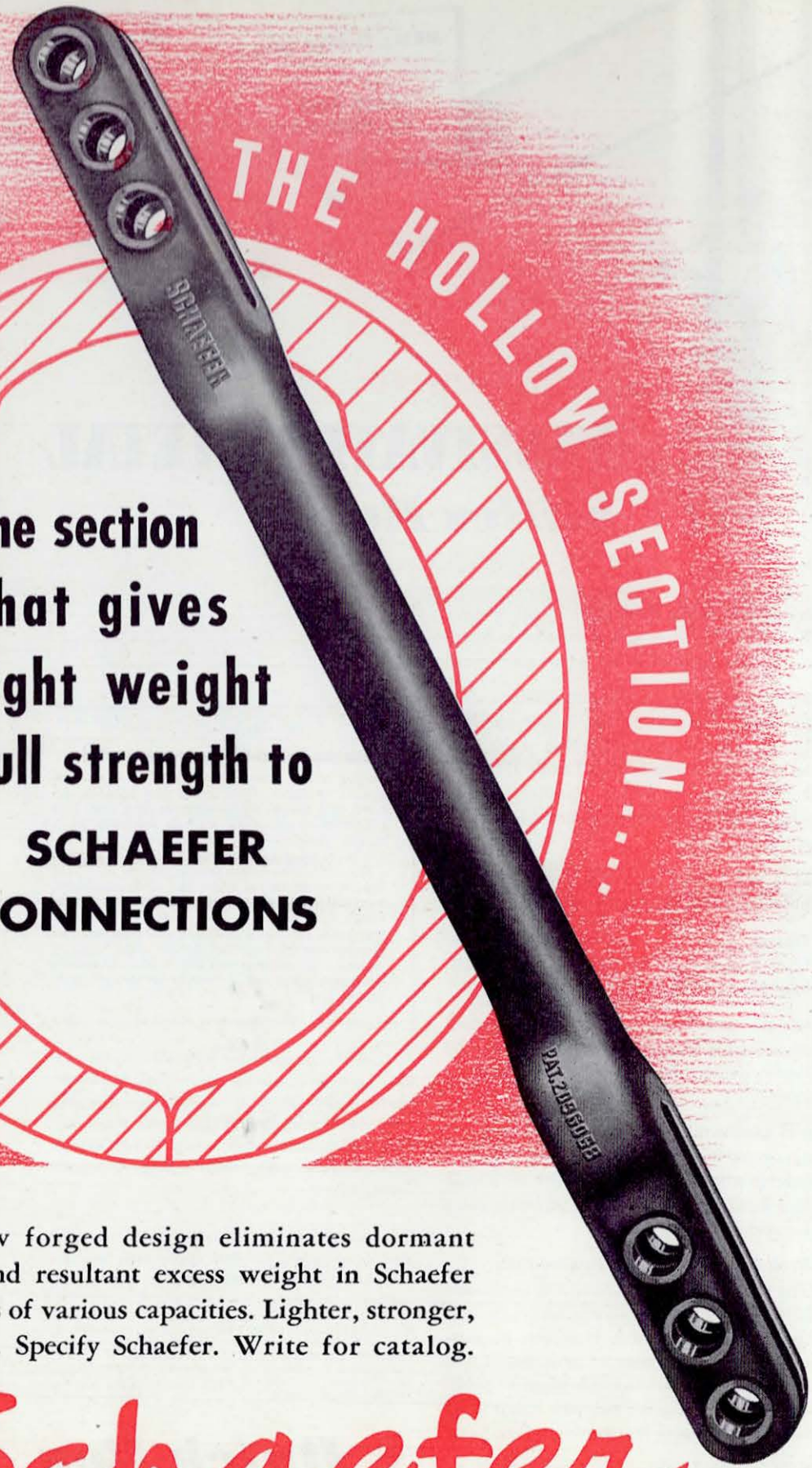
The benefit of our extensive experience with Red Lead paints for both underwater and atmospheric use is available through our technical staff.

NATIONAL LEAD COMPANY: New York 6; Buffalo 3; Chicago 80; Cincinnati 3; Cleveland 13; St. Louis 1; San Francisco 10; Boston 6, (National Lead Co. of Mass.); Philadelphia 7, (John T. Lewis & Bros. Co.); Pittsburgh 30, (National Lead Co. of Pa.); Charleston 25, W. Va. (Evans Lead Division).

Dutch Boy
Reg. U. S. Pat. Off.
Red Lead

Look for

THE HOLLOW SECTION....



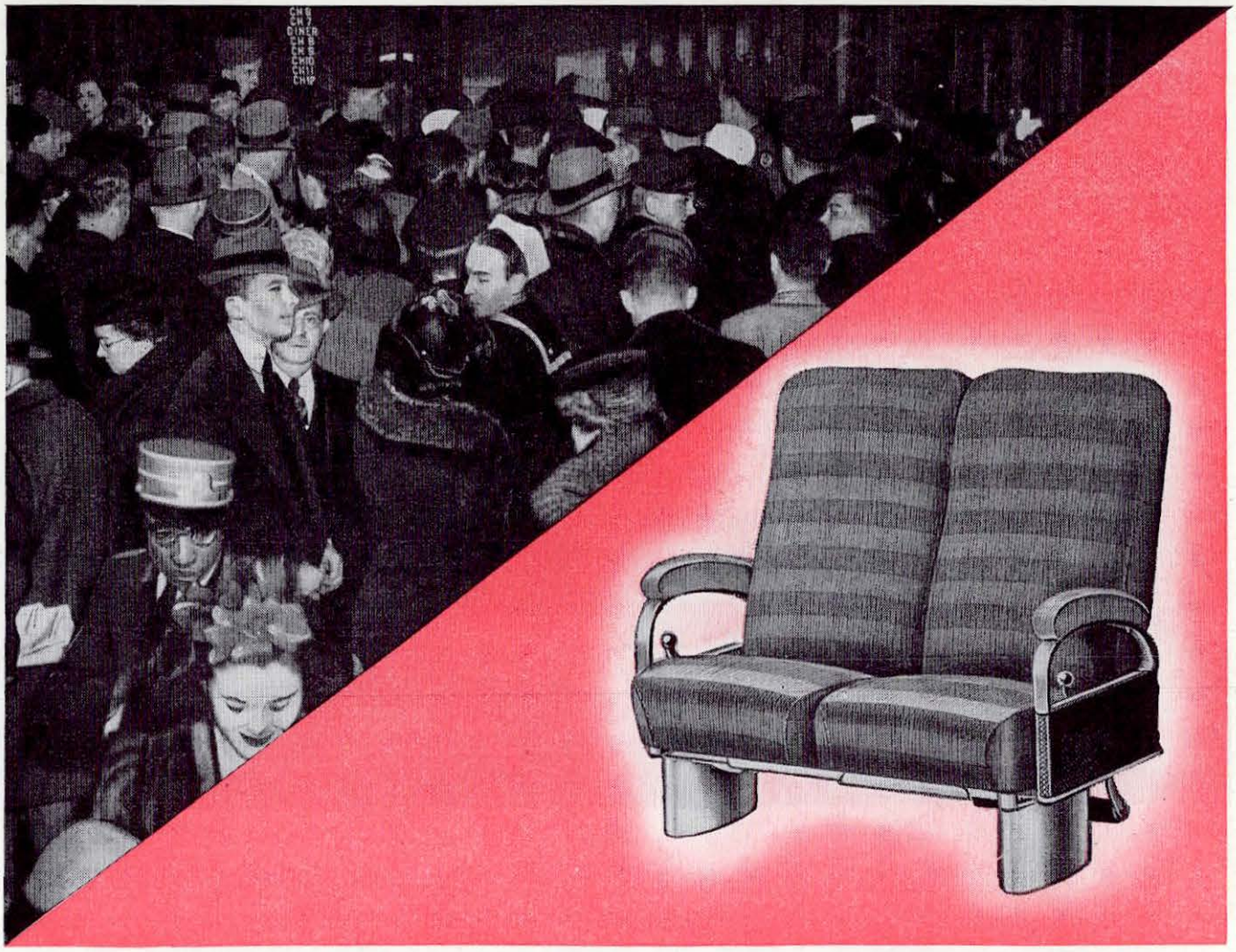
the section that gives light weight –full strength to SCHAEFER CONNECTIONS

The hollow forged design eliminates dormant material and resultant excess weight in Schaefer connections of various capacities. Lighter, stronger, longer life. Specify Schaefer. Write for catalog.

Schaefer

SCHAEFER EQUIPMENT COMPANY • • • KOPPERS BLDG. PITTSBURGH, PA.

TRAIN SEATS WORKING OVERTIME!



—but GOODALL *Blended-for-Performance* PILE FABRICS can "take" it!

Goodall, one of the largest suppliers of fabrics for railroads, creates fabrics specially blended of mohair yarns to "perform" better and longer. So no wonder Goodall *Blended-for-Performance* Velmo Fabrics have an amazing record of long life under today's severe rough-and-tumble abuse. Blending builds in extra toughness. Goodall blending also means ***low-cost maintenance.*** And blending provides the greater beauty of colors and textures which are inspirations for modern train interiors.

Goodall-Fabrics INC.
Subsidiary of Goodall-Sanford, Inc.
THE FINEST NAME IN FABRICS

BOSTON • NEW YORK
CHICAGO • DETROIT • LOS ANGELES

"with radio the yardmaster has

constant contact

with switch crew" *

More important, railroad radio opens the door to a whole new concept of cutting handling costs. For railroad radio has cut switching time in hump yards by 10%. More, in many cases.

Westinghouse railroad radio gives a yardmaster instant contact with his switch crews, irrespective of fog, rain, sleet, darkness or other visual handicaps. The system is so easy to operate anyone who can use a telephone can use railroad radio. And no wayside wires are needed.

Communication is clear and noise-free, assured by improved FM circuits and automatic controls. When you check railroad radio for your own use, be sure you capitalize on the Westinghouse pioneering that developed it more than 20 years ago, designed exclusively for railroads. For the experience of Westinghouse in radio designing and actual operation is unmatched by any other manufacturer.

Railroad radio—a product of the 60-year association of railroads and Westinghouse—offers one of the greatest opportunities to move goods faster and cheaper. Write your nearest Westinghouse office today for the full story. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-02081

From a report of Subcommittee 1-C of the American Association of Railroad Superintendents on freight yard communications.

Westinghouse Railroad Radio

Electronics at Work

FULL FORMED HEADS

Always sharp cornered and straight sided—perfect wrench fit assured.

STRONG, ROUND SHANKS

Accurate in diameter—slide into bolt holes freely and easily.

CLEAN, SHARP THREADS

Exact for spacing and depth—nuts turn up smoothly without jamming.

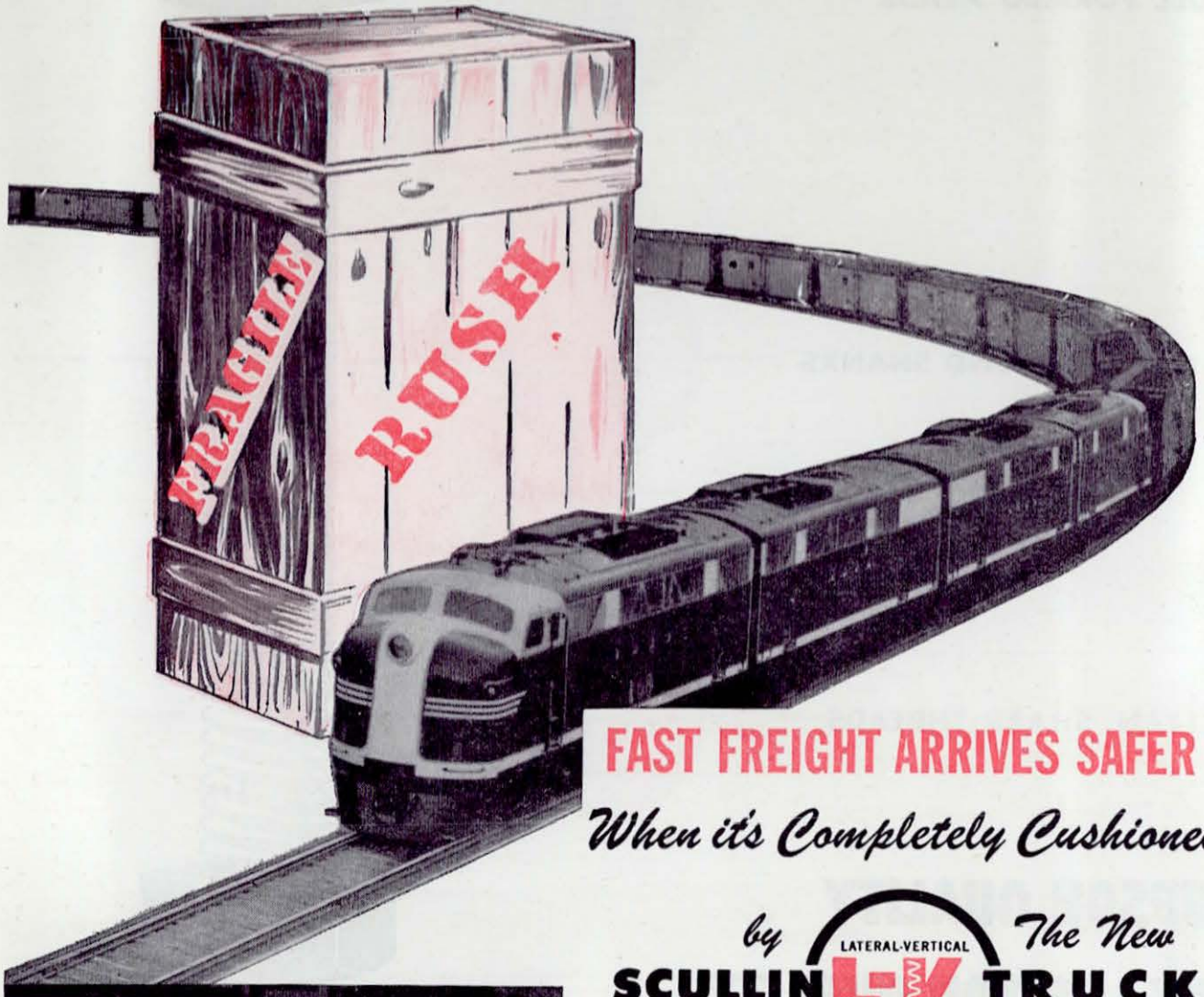
UPSON QUALITY MEANS TOP QUALITY

And it's the same top quality—uniform throughout more than 20,000 different headed and threaded items—which means fast assembly and lasting holding power wherever Republic UPSON Quality Products are used.

REPUBLIC STEEL CORPORATION
BOLT AND NUT DIVISION • CLEVELAND 13, OHIO
Export Department: Chrysler Building, New York 17, N. Y.

REPUBLIC *Upson Quality* BOLTS AND NUTS

Other Republic Products include Pipe, Sheets, Plates, Bars, Electrunite Boiler Tubes—Carbon, Alloy and Enduro Stainless Steels



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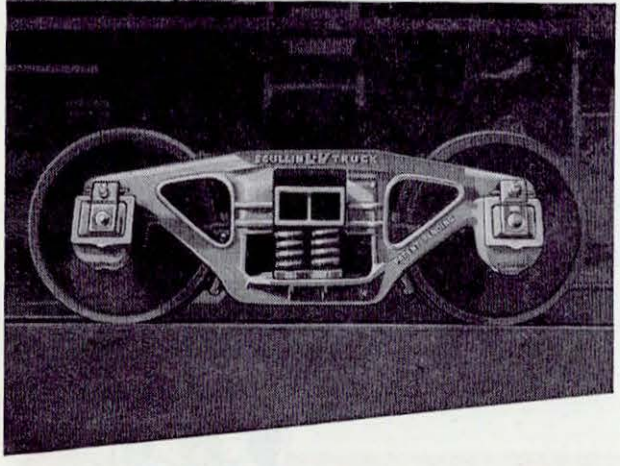

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ASSOCIATION OF AMERICAN RAILROADS

November 19, 20, 21, 1946

at

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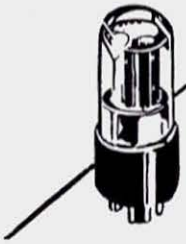

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Railway Age

With which are incorporated the Railway Review, the Railway Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

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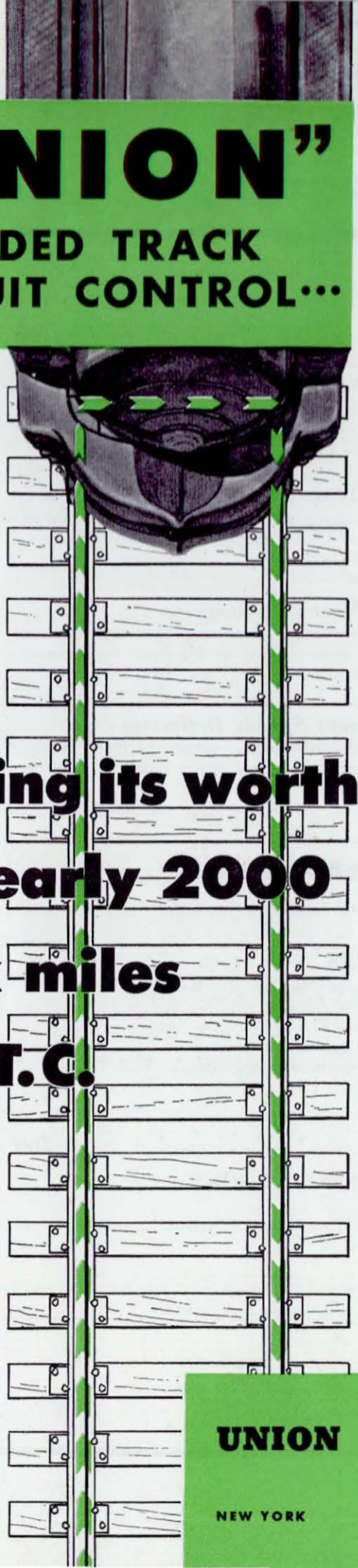

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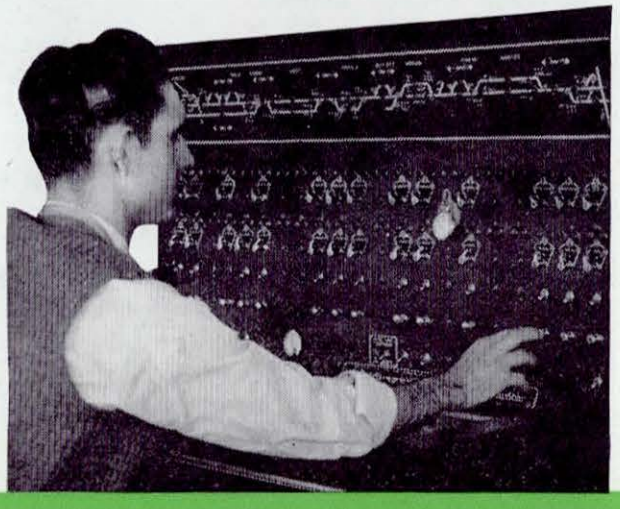

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The Week at a Glance

WHAT RATE ADVANCE?: With inadequate railroad capacity the one great bottleneck threatening restriction of all construction and production, the railroads should now launch a much larger improvement program than that financed by the billion-dollar-a-year expenditures of the decade ending with 1930, when labor and material costs were much lower. This issue's leading editorial appraises the pending rate-advance application in the light of that outlook, setting down six cogent reasons why the carriers will require the full increase sought if their future net operating income is to be adequate. Even then, the average revenue per ton-mile would be 10 per cent less than in 1921 and above 1929 and 1940 by only 6 and 22 per cent, respectively. Wholesale prices in July were 27 per cent above the July, 1929, average, and up 60 per cent from July, 1940.

●

DRIVEN TO DIESELS: Labor disturbances in the coal industry have impelled the Jersey Central to issue a declaration of independence. It will discontinue the use of bituminous coal as locomotive fuel as rapidly as it can replace its coal burners with Diesel-electrics. Chief Executive Officer William Wyer voiced the road's "fed-up" attitude as he accepted delivery of a Baldwin Diesel this week. The Jersey Central and its patrons, he asserted, "cannot and will not be placed at the mercy of the whims of any man who decides to call a strike in the soft coal mines when it suits his fancy."

●

MECHANIZED STORE: The Union Pacific spends in excess of $83 million a year for more than 85,000 different items of materials and supplies. To assure accurate control and avoid congestion as much of this tremendous load moves over platforms and loading docks of the main storehouse in Omaha, a handling system that makes extensive use of mechanized equipment has been installed. Various buildings and storage points of the facility are connected by a system of concrete roadways which extends also to the locomotive repair shops nearby; and tractors, lift trucks, a tractor crane and auto trucks are in operation under stores-department supervision. One of this issue's feature articles tells how this mechanized set-up has brought about better utilization of storage space and eliminated bottlenecks in loading and unloading cars.

●

R. C. C. PAYS UP: The liquidating distribution to be paid by the Railroad Credit Corporation on November 15 will mark the return to participating roads of 100 per cent of the original fund contributed by them under the so-called "marshalling and distribution" plan of 1931. But R. C. C. President E. G. Buckland has pointed out that while the contributors will thus lose none of their principal, they got nothing for the use of their money for nearly 15 years. As our news story recalls, the R. C. C. set-up for loaning money to needy roads during the period from January, 1932, through May, 1933, resulted from the I. C. C.'s October, 1931, decision in Ex Parte 103. That decision authorized certain emergency freight-rate increases upon condition that the revenues derived therefrom be pooled and distributed to needy roads. The pooling requirement was eliminated after the railroads agreed on the R. C. C. lending plan.

●

CARRYPHONES ON P. R. R.: The Pennsylvania recently placed in service the "Carryphone," a portable telephone set which was perfected after several years of cooperative activity with the Union Switch & Signal Company. Similar in many respects to the "walkie-talkie" but employing induction instead of space radio, the device is primarily an adjunct of the P. R. R.'s inductive trainphone system. It is expected to be found valuable in many phases of railroading—for example, on wreck trains and work trains where the operation of derricks and machines of various kinds must be coordinated and directed from one location. Also regular train crews find "Carryphone" a convenient tool, as W. R. Triem, the P. R. R.'s general superintendent of telegraph, points out as he describes the unit in an illustrated feature article herein.

●

COMPOUND INTEREST: The Monon's president, John Barriger, this week likened railroad improvements to compound interest—each one completed makes the next easier to accomplish. He drew the analogy in accepting delivery of a new Fairbanks, Morse Diesel switcher; and then continued to assert his intention of carrying out an improvement program calculated to make the Monon's Hammond-Indianapolis line the fastest in the world, with train speeds of 100 m.p.h. commonplace. Mr. Barriger came to the presidency of the Monon following its recent emergence from reorganization proceedings.

●

HONORS FOR EIGHT: For "distinguished service to the nation in the field of transportation during the war," President Truman has awarded Certificates of Merit to eight members and former members of the O. D. T. and A. A. R. staffs. O. D. T. Director Johnson will make the presentations at Washington ceremonies on November 12. The certificate awarded posthumously to the late Michael J. Gormley will be accepted by his widow, Mrs. Marie O'Neill Gormley. Others to be honored are James H. Aydelott, Charles H. Buford, Arthur H. Gass, Warren C. Kendall, Homer C. King, Henry F. McCarthy, and Guy Richardson.

●

SEPTEMBER NET: Class I railroads in September reported a net railway operating income of $67,362,490, while their estimated net income for the month was $38,500,000. These compare, respectively, with September, 1945, figures of $43,133-855 and $8,848,870; but the A.A.R.'s Bureau of Railway Economics points out that the 1946 results are reflecting the benefits of large carryback tax credits, although the September credits had not been isolated for purposes of before-and-after comparisons when the foregoing figures were released.

GAIN: This week's election results will mean a substantial increase in the relative strength in Washington of the party which is generally less friendly than its rival to the further extension of state socialism. So the outcome must be welcomed by all who prefer freedom to coercion as the dominant quality in the country's economic life. It should encourage greater business activity and larger production, bringing more traffic to the railroads. Thus does one of the editorials herein say "the best that can be said" in the Republicans' favor from the standpoint of the well-being of the railroads at the hands of politics. For anyone who fancies that a G. O. P. in control at Washington would put a stop to political raids on the railroads will be quickly disillusioned by a look at the record—for example, the House vote last summer on the Crosser bill. Some Republicans are endorsed by P. A. C. and deserve to be, while others go along with business interests seeking subsidies and other favors for transport agencies competing with the railroads.

●

CHALLENGE: Thus the editorial's conclusion that the outcome is far less a cause for complacency than a challenge to action. The railroads have not gained a victory in their effort to secure political treatment which accords with economic facts—but they are separated from such a victory by considerably less distance than they have been at any time since 1933. Vigor, speed, intelligence and candor in awakening public understanding and support for the economic principles necessary for a thriving railroad industry now give hope of producing tangible and definite results.

●

ELECTRICAL MEETINGS: The electrical sections of the A. A. R.'s Engineering and Mechanical divisions held separate Chicago meetings during the week of October 21 in conjunction with an exhibit staged by the Railway Electrical Supply Manufacturers Association. Our report of the sessions appears on page 756. The "radio and communication" report of the Mechanical division's section includes a list of roads which are actively engaged in testing train radio or inductive communication equipment or which are proceeding with permanent installations.

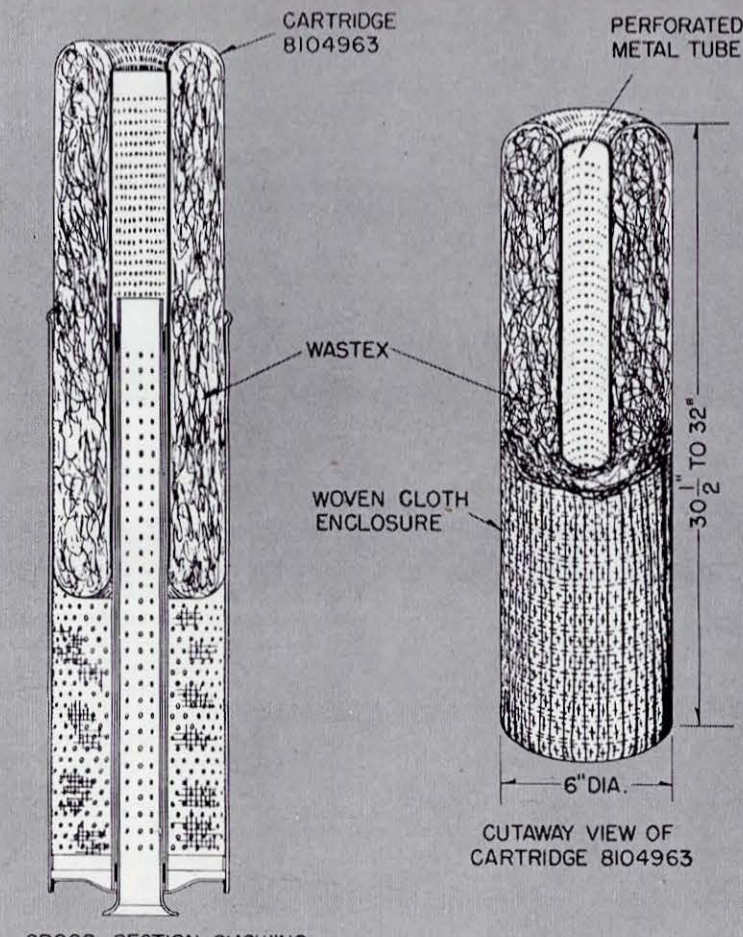
●

NEW RAIL DESIGNS: The three new rail sections adopted recently by the American Railway Engineering Association are described in one of this issue's illustrated feature articles. They are 115-lb. RE to replace the present 112-lb. RE, and 132-lb. RE and 133-lb. RE to supersede the present 131-lb. RE. Developed with benefit of advanced techniques in rail study, the new designs are also based on both field and laboratory investigations carried out by the research staff of the A. A. R.'s Engineering Division and the P. R. R.'s test department. The idea of having two new sections to replace the existing 131-lb. section breaks precedent; but the 133-lb. section is expected to meet requirements of roads which desired a deeper head than that of the new 132-lb. section for their heavy-traffic lines.

It pays off—

Use GM Lube Oil Filter Cartridges

IN GENERAL MOTORS DIESELS



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CUTAWAY VIEW OF CARTRIDGE 8104963

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RAILWAY AGE

What Advance in Rates Do Railways Need?

Measured by experience in July and August, the only months since the increase of 6½ per cent in freight rates went into effect for which complete statistics are yet available, the railways will have to have at least the entire advance of 25 per cent in freight rates for which they sought authorization last April if they are to earn in future as much net operating income as they will require to finance adequately the rehabilitation, improvement and expansion of their properties necessitated in the public interest by current and prospective demands of traffic. This is shown by the following facts:

1. In the ten years ending with 1930 railway net operating income averaged $1,017 million annually. Actual experience during that decade showed that this amount of net operating income was then needed to make possible financing of the rehabilitation, improvement and expansion required following World War I. The needs of the railways during the present post-war period will be much greater than during the last post-war period. Previously to World War I they had continuously made large increases in their investment for a long period of years. There was no net increase at all in their investment during the decade of depression preceding World War II. Also, investment was rigidly restricted during World War II. Co-operation of shippers and character of the traffic made it possible to handle much more traffic during the recent war years than can be handled with equal facilities under peace-time conditions.

Inadequate Capacity a Bottleneck

The volume of freight traffic (tons carried one mile) handled in August, 1946, was 31½ per cent greater than under peace-time conditions in August, 1929. The railways had no difficulty in handling the traffic in 1929. Now, under peacetime conditions the demands of traffic have become as great as during the war, and much greater than ever previously in time of peace, although construction and production have not as yet risen to the level to which they will attempt to rise when bottlenecks now directly restricting them have been eliminated. The one great bottleneck now threatening restriction of all construction and production is inadequate railroad capacity. The railways need to carry out a much larger program of improvements and expansion than during the decade ending with 1930; and their costs of labor and materials are much higher. Consequently, they will need to earn during the next decade an average annual net operating income of about $1,250 million, ranging from about $1,000 million to $1,500 million, or approximatly 25 per cent more than in the decade ending with 1930.

August Results Prove Case

2. The year 1929 was one of large traffic and earnings, and in that year the net operating income earned was $1,275 million—almost exactly the amount that will be needed *on the average annually* during the next decade. The month of August contributed $142 million to the net operating income of 1929. In the ten years ending with 1930 net operating income in August averaged about 11 per cent of annual net operating income. On this basis, net operating income in August during the present decade should range from $110 million to $165 million and average about $138 million. Probably, on the whole, August, 1946, should be considered an average August, as regards total traffic, in the present decade, because probably in future freight traffic will increase and passenger traffic decline. The net operating income reported for August was only $82 million and large deductions must be made from it to arrive at a reasonable estimate of railway earning capacity with present rates. A deduction of $5,850,000 must be made because of "carry backs" of excess profits taxes that were credited to in August. Also, Congress at its recent session passed the Crosser Bill for increasing the payments the railroads must make to retirement and benefit funds for their employees which, when it goes into effect, will cost about $7,500,000 a month. Had there been no "carry backs," and had the Crosser Bill been in effect, the net operating income actually earned by the railroads in August would have been only about $68 million, or about $42 million less than the minimum, or $70 million less than the average, and $97 million less than the maximum that should be earned in that month during the present period. Freight earnings in August were $546 million. Hence, about 13 per cent larger freight earnings would have been necessary in August to have enabled the railways to have earned as much net operating income as they should be averaging in that month; and this would have required the general advance of 25 per cent in rates, with subsequent necessary readjustments, for which they originally asked.

3. How high would an advance of 25 per cent

A.R.E.A. Adopts Three New Rail Designs

Abandons 112-lb. and 131-lb. RE sections for weights of 115, 132 and 133 lb. per yd., which marks a new era in rail development

UNDER the sponsorship of its Committee on Rail, the American Railway Engineering Association has adopted three new rail sections—115-lb. RE, 132-lb. RE and 133-lb. RE, to replace its present 112-lb. RE and 131-lb. RE sections. It has also adopted joint bar designs for each of the new sections. The action with regard to both the rail and joint bars had been stepped up by resorting to letter ballot of the membership to permit 1947 deliveries, and the new designs were approved by the vice-president, operation and maintenance, Association of American Railroads, on October 19.

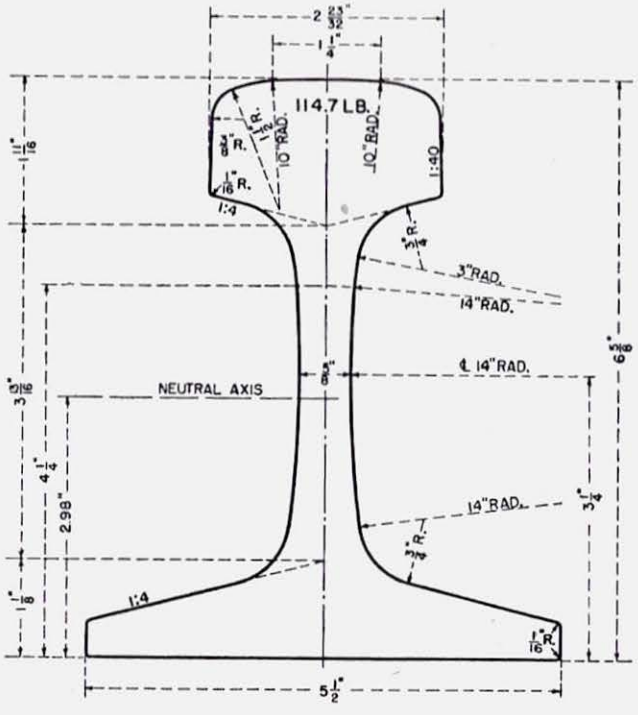

Fig. 1—New 115-lb. RE rail section

	Area Sq. In.	Per cent
Head	3.91	34.8
Web	3.05	27.1
Base	4.29	38.1
Total	11.25	100.0

Moment of inertia	65.6
Section modulus, head	18.0
Section modulus, base	22.0
Ratio m.i. to area	5.83
Ratio s.m. head to area	1.60
Ratio height to base	1.20

Each of the new sections has outstanding features of merit in itself, but equally, if not more important, is the fact that in their development they mark a new period in rail design, having been the result of a new technique in rail study, begun in 1940, when the late Dr. A. N. Talbot, University of Illinois, arranged for the use of carbon-strip gages in the measurement of the vertical components of the stresses in the webs of 112-lb. rail on the Denver & Rio Grande Western over gage distances as short as one-half inch. The development of these small gages and the subsequent introduction of the minute wire resistance gages made it possible to undertake detailed stress surveys of rails under load, and thus provided an entirely new fund of information concerning the behavior of each in service.

Two Sections Replace One

The new rail designs are based on both field and laboratory investigations carried out by the research staff of the Engineering division, A. A. R., and the test department of the Pennsylvania railroad, that provided a mass of reliable information beyond anything previously available in the study of rail design.

The new 115-lb. section supersedes the 112-lb. section of the Association, which has been withdrawn from its Manual of Recommended Practice. The former 131-lb. section has also been withdrawn from the Manual, and is superseded by the new 132 and 133-lb. sections. In submitting the two new latter sections for adoption in place of the existing 131-lb. section, it was recognized that a departure was being made from an established policy of offering only a single section of given weight for one being superseded, but because a considerable number of heavy-traffic roads desired a rail having a deeper head than the proposed 132-lb. section, it was decided that both the 132-lb. and the 133-lb. sections should be made available.

The 132-Lb. Section

The last three reports of the Rail committee have included studies relating to the form and dimensions of the webs of the 112-lb. RE and 131-lb. RE rail sections, as the result largely of the fact that stress measurements made several years ago revealed the occasional occurrence of high localized stresses in the upper part of the web and the upper fillets, particularly on the gage side, which were accounted for by eccentric loading of the rail when the wheel bearing comes near the gage corner. In the ensuing investigation, extensive stress measurements were made in the field to determine the frequency of these high stresses with relation to the amount of traffic carried; laboratory tests were made to determine the fatigue strength of the steel in the rail web; and stress measurements were made with rails having various modified web designs to determine the extent that localized web and fillet stresses could be lowered by changes in design.

As a result of this investigation, the rail design shown in Fig. 1, weighing 114.7 lb. per yd. was recommended by the Rail committee to replace the present 112-lb. RE section, the new section having the general proportions of the present 112-lb. RE rail, with the same overall height and base width of 6⅝ in. and 5½ in., respectively, these proportions being considered to be efficient with respect to flexural bending strength and

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The volume of freight traffic (tons carried one mile) handled in August, 1946, was 31½ per cent greater than under peace-time conditions in August, 1929. The railways had no difficulty in handling the traffic in 1929. Now, under peacetime conditions the demands of traffic have become as great as during the war, and much greater than ever previously in time of peace, although construction and production have not as yet risen to the level to which they will attempt to rise when bottlenecks now directly restricting them have been eliminated. The one great bottleneck now threatening restriction of all construction and production is inadequate railroad capacity. The railways need to carry out a much larger program of improvements and expansion than during the decade ending with 1930; and their costs of labor and materials are much higher. Consequently, they will need to earn during the next decade an average annual net operating income of about $1,250 million, ranging from about $1,000 million to $1,500 million, or approximatly 25 per cent more than in the decade ending with 1930.

August Results Prove Case

2. The year 1929 was one of large traffic and earnings, and in that year the net operating income earned was $1,275 million—almost exactly the amount that will be needed *on the average annually* during the next decade. The month of August contributed $142 million to the net operating income of 1929. In the ten years ending with 1930 net operating income in August averaged about 11 per cent of annual net operating income. On this basis, net operating income in August during the present decade should range from $110 million to $165 million and average about $138 million. Probably, on the whole, August, 1946, should be considered an average August, as regards total traffic, in the present decade, because probably in future freight traffic will increase and passenger traffic decline. The net operating income reported for August was only $82 million and large deductions must be made from it to arrive at a reasonable estimate of railway earning capacity with present rates. A deduction of $5,850,000 must be made because of "carry backs" of excess profits taxes that were credited to in August. Also, Congress at its recent session passed the Crosser Bill for increasing the payments the railroads must make to retirement and benefit funds for their employees which, when it goes into effect, will cost about $7,500,000 a month. Had there been no "carry backs," and had the Crosser Bill been in effect, the net operating income actually earned by the railroads in August would have been only about $68 million, or about $42 million less than the minimum, or $70 million less than the average, and $97 million less than the maximum that should be earned in that month during the present period. Freight earnings in August were $546 million. Hence, about 13 per cent larger freight earnings would have been necessary in August to have enabled the railways to have earned as much net operating income as they should be averaging in that month; and this would have required the general advance of 25 per cent in rates, with subsequent necessary readjustments, for which they originally asked.

3. How high would an advance of 25 per cent

Results of Railway Operation

August, 1929, and August, 1946

	August 1929	August 1946	% Inc. or Dec. 1946-1929
Revenues:			
Freight	$446,609,835	$546,129,592	+ 22.3
Rev. Ton-Miles	41,146,006	54,000,000	+ 31.5
Rev. Per Ton-Mile	1.085¢	0.989¢	− 8.9
Passenger	84,315,156	112,114,681	+ 33.0
Passenger-Miles	3,177,569	5,714,286	+ 79.8
Rev. Per Passenger-Mile	2.646¢	1.96¢	− 25.9
Mail	11,198,432	10,364,502	− 7.5
Express	12,200,992	7,797,627	− 36.1
All Other, etc.	19,040,707	33,817,703	+ 77.6
Railway Operating Revenues	587,322,413	710,224,105	+ 20.9
Expenses:			
Maintenance of Way & Structures	82,921,197	102,875,222	+ 24.1
Maintenance of Equipment	103,135,797	126,691,812	+ 22.8
Traffic	10,913,666	13,899,450	+ 27.3
Transportation	179,150,208	281,654,498	+ 57.2
Miscellaneous	5,447,674	11,901,919	+118.5
General	16,059,103	18,869,488	+ 17.5
Railway Operating Expenses	396,204,945	555,892,389	+ 40.3
Net Revenue from Railway Operations	191,117,468	154,331,716	− 19.3
Railway Tax Accruals	38,371,255	58,334,295	+ 52.0
Pay-Roll Taxes		21,983,470	
Federal Income Taxes		13,841,670	
All Other Taxes		22,509,155	
Railway Operating Income	152,666,539	95,997,421	− 37.1
Equipment Rents	8,555,228	11,035,838	+ 29.0
Joint Facility Rents	2,352,812	3,268,331	+ 38.9
Net Railway Operating Income	141,758,499	81,693,252	− 42.4
Ratio of Expenses to Revenues (Per Cent)	67.5	78.3	

(including the 6½ per cent already authorized) make freight rates as compared with the levels to which they have been raised in the past? We have no measure of their general level excepting average revenue per ton per mile. In 1917 average revenue per ton per mile was 7.15 mills. After the advances made under government operation in 1918 and 1919, and subsequent to the return of the railways to private operation in 1920, average revenue per ton per mile advanced in 1921 to 12.75 mills—78 per cent higher than in 1917. Average revenue per ton per mile in August, 1929, was 10.85 mills. In the year 1940 it was 9.46 mills. In June, 1946, before the small advance effective on July 1, it was 9.21 mills; and an increase of 25 per cent in this would make it 11.51 mills. This would be 10 per cent less than it was in 1921, 6 per cent more than in 1929 and 22 per cent more than in 1940. How high would a further advance of 25 per cent in freight rates make them compared with prices? In July, 1946, wholesale prices averaged 27 per cent higher than in July, 1929, and 60 per cent higher than in July, 1940. Industries, the prices of which have been increased an average of 60 per cent since 1940, are hardly in a position consistently to oppose an advance in freight rates which would make them only 22 per cent higher than in 1940.

The comparative statistics for August, 1929, and August, 1946, given in the accompanying table indicate forcibly the differences between the conditions confronting the railroads in the peace-time period which preceded the depression and in the present peace-time period. From a freight traffic 31.5 per cent larger and a passenger traffic 33 per cent larger than in August, 1929, they derived gross earnings in August, 1946, only 21 per cent larger, while incurring operating expenses 40.3 per cent larger. Taxes, allowing for "carry backs," were 52 per cent larger.

When the railways presented to the Interstate Commerce Commission in April their original application for a general advance of 25 per cent in freight rates, which they then estimated would, after necessary readjustments, produce an increase in freight revenues of about 20 per cent, they could not foresee that subsequent government intervention would make it necessary for them to grant larger advances in wages than had been previously awarded by arbitration boards and government fact-finding boards. Neither could they then foresee that Congress would subsequently pass a bill which would increase their payroll taxes by $90 million a year. Nevertheless, experience to date indicates that they estimate their future needs with approximate accuracy. They clearly need the entire 25 per cent advance in freight rates for which they originally asked; and it is a virtual certainty that their net operating income in future will be inadequate unless the Commission finally authorizes the entire advance originally sought.

More Encouragement Needed

Prior to the convention of the Roadmasters' and Maintenance of Way Association at Chicago in September, one of the members, a practical track man of many years' experience, intended to express himself at considerable length regarding his opinions on the track-maintenance problems of today and what he thinks should be done about them. He even went so far as to reduce his thoughts to writing with the intention of reading them before the convention if an opportunity could be found to do so without disrupting the regular program. Unfortunately, the desired opportunity did not present itself and the member remained silent throughout the meeting.

We say "unfortunately" because the association and its members were denied some exceedingly original and constructive thoughts regarding one of the most pressing railroad problems of the day, that of holding track-maintenance expenses under rigid control while at the same time keeping the tracks up to the high standards of construction and maintenance that are demanded. An integral aspect of this problem is that the value of the maintenance dollar, in terms of labor and materials, has declined substantially and is still going down. This member of the Roadmasters' Association sees a "very black future indeed unless some drastic measures are devised to make maintenance-of-way money go much further than it does at present."

According to this track man the best approach to the problem would be to "overhaul each and every one of our practices, examine them from every angle and ask ourselves: Why is this done in this manner? Is there a better and more economical method we can devise?" He would advise his listeners to "try to visualize maintaining track with rail having practically unlimited life, with no joints to maintain except at signals, with crossties that will last as long as the rail, with no necessity of regaging at any time, and with roadbeds from which all weak spots have been eliminated by grouting or other effective stabilization methods. What we aim at we can sooner or later hit; there may

be a lot of shooting and many misses, but markmanship will get better the more we try."

He is convinced that progress in this direction has been slowed by the failure of supervisory officers of roadmaster rank "to present forcibly to management at all times and at every opportunity, ways, methods, materials and practices that they have found result in the greatest economy, based on their practical experience and constant close association with track, year in and year out."

Unquestionably the roadmaster is in an admirable position to know what is required in the way of improvements in methods, materials and devices, and doubtless many of them have not been as aggressive as they could be in making themselves heard in this regard. But, on the other hand, isn't this a management problem, too? Shouldn't management and executives take the initiative in encouraging roadmasters, with their great store of practical knowledge of track matters, to speak their minds freely regarding improvements? Such encouragement, if of a direct and tangible nature, might produce some surprising results.

Railroads' Political Troubles Are Not Ended

The outcome of this week's elections cannot be interpreted otherwise than as an emphatic about-face by the country from its course into national socialism, inaugurated by the late Franklin D. Roosevelt and continued, though not with equal zeal or cleverness, by President Truman. It is true that not all Democrats, by any means, are protagonists of socialism; while some Republicans are endorsed by the P. A. C. and deserve to be. Nevertheless, in general, the Republican party is less friendly than its rival is to the further extension of state socialism; and substantial increase in its relative strength in Washington must be welcomed by all who prefer freedom to coercion as the dominant quality in the country's economic life.

Republican victory at the polls, therefore, can scarcely fail to encourage greater business activity and larger production—and should promise more traffic to the railroads than could have been foreseen if the party which kept the country in a decade of depression had retained its strength. From the standpoint of the well-being of the railroads at the hands of politics, however, the foregoing is the best that can be said in the Republicans' favor. Anyone who fancies that a G. O. P. in control at Washington would put a stop to political raids on the railroads, either by organized labor or by subsidy-seekers in behalf of rival agencies of transportation, will be quickly disillusioned by a look at the record. Take, for example, the vote in the House of Representatives last summer on the so-called "Crosser bill," vastly extending "social security" benefits to railroad employees.

Proposed changes in pensions and unemployment insurance for railroad employees—already far more generous than those provided for all Americans not set apart for such privileged attention—had been the subject of intensive study by the able House committee on interstate commerce, under the chairmanship of Congressman Lea of California, who has gained such recognition for his devotion to the public interest that, for many terms, he has been the candidate of *both* major political parties in his constituency. As the fruit of its thorough inquiry, this committee reported a bill for moderate revisions in the railroad "social security." The railway unions "turned on the heat" against the report of the committee on interstate commerce and, by a vote of 189 to 64, the House spurned the advice of its own expert committee and substituted instead the so-called "Crosser bill"— knowing full well that the substitute bill was written, down to its very last comma, by the railway unions; and that it incorporated no consideration of the public interest or any other interest whatsoever than the selfish wishes of the leaders of the railway unions.

And how did House Republicans record themselves on this issue? They voted 71 for and only 52 against the substitution of the Crosser measure for the recommendation by the committee on interstate commerce. The Republicans, that is, in this highly significant test of their degree of devotion to principle, as opposed to surrender to the demands of an insistent union pressure group, went on record in the ratio of about 3 to 2 in favor of submission to union dictation. It has been the cynical philosophy of political tyranny from the days of Plato down to the present that "Justice is the will of the stronger"; and Republicans in Congress have demonstrated that this is still the philosophy of 3 out of 5 of their number in resolving differences between the railroads and their organized employees. It is true that the Democrats in the House voted even more overwhelmingly—in the ratio of 9 to 1—in favor of the bill dictated by the unions. But, under majority rule, the cause of justice and fair dealing is lost as effectively by an adverse vote of 3 to 2 as it is by one of 9 to 1.

The railroad's burdens at the hands of politics—which, incidentally, are the only handicaps they suffer, denying them prosperity equaling that of any other large business in the country—arise in almost equal measure from the inordinate political power possessed by two "pressure groups," viz., (1) organized railway labor and (2) business interests seeking subsidies and other favors for agencies of transportation which are rivals of the railroads. There is no evidence that the increased strength of the Republicans in Congress has placed either of these groups in a minority with respect to further political forays against the railroads. There is evidence, however, that their strength is now considerably less than it was prior to November 5. The railways have not gained a victory in their effort to secure political treatment which accords with economic facts—but they are separated from such a victory by considerably less distance than they have been at any time since President Roosevelt in 1933 repudiated the promises which won the election for him in 1932.

The outcome of the election is, thus, for the railroads far less a cause for complacency than a challenge to action. Vigor, speed, intelligence and candor in awakening public understanding and support for the economic principles necessary for a thriving railroad industry now give every hope of producing tangible and definite results.

A.R.E.A. Adopts Three New Rail Designs

Abandons 112-lb. and 131-lb. RE sections for weights of 115, 132 and 133 lb. per yd., which marks a new era in rail development

UNDER the sponsorship of its Committee on Rail, the American Railway Engineering Association has adopted three new rail sections—115-lb. RE, 132-lb. RE and 133-lb. RE, to replace its present 112-lb. RE and 131-lb. RE sections. It has also adopted joint bar designs for each of the new sections. The action with regard to both the rail and joint bars had been stepped up by resorting to letter ballot of the membership to permit 1947 deliveries, and the new designs were approved by the vice-president, operation and maintenance, Association of American Railroads, on October 19.

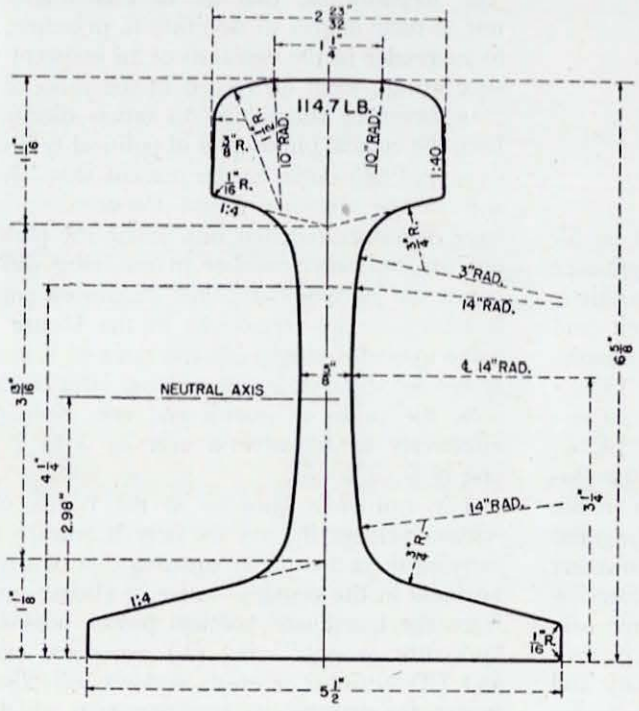


Fig. 1—New 115-lb. RE rail section

	Area Sq. In.	Per cent
Head	3.91	34.8
Web	3.05	27.1
Base	4.29	38.1
Total	11.25	100.0

Moment of inertia	65.6
Section modulus, head	18.0
Section modulus, base	22.0
Ratio m.i. to area	5.83
Ratio s.m. head to area	1.60
Ratio height to base	1.20

Each of the new sections has outstanding features of merit in itself, but equally, if not more important, is the fact that in their development they mark a new period in rail design, having been the result of a new technique in rail study, begun in 1940, when the late Dr. A. N. Talbot, University of Illinois, arranged for the use of carbon-strip gages in the measurement of the vertical components of the stresses in the webs of 112-lb. rail on the Denver & Rio Grande Western over gage distances as short as one-half inch. The development of these small gages and the subsequent introduction of the minute wire resistance gages made it possible to undertake detailed stress surveys of rails under load, and thus provided an entirely new fund of information concerning the behavior of each in service.

Two Sections Replace One

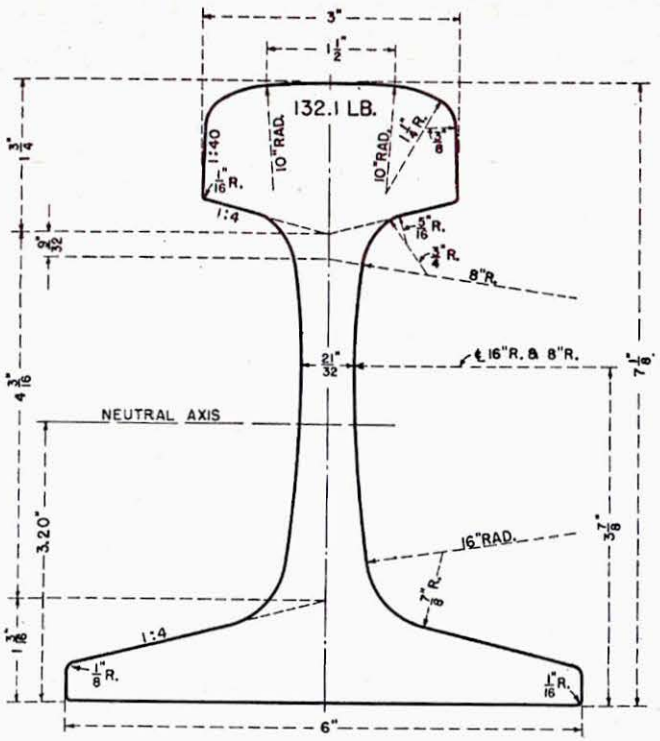
The new rail designs are based on both field and laboratory investigations carried out by the research staff of the Engineering division, A. A. R., and the test department of the Pennsylvania railroad, that provided a mass of reliable information beyond anything previously available in the study of rail design.

The new 115-lb. section supersedes the 112-lb. section of the Association, which has been withdrawn from its Manual of Recommended Practice. The former 131-lb. section has also been withdrawn from the Manual, and is superseded by the new 132 and 133-lb. sections. In submitting the two new latter sections for adoption in place of the existing 131-lb. section, it was recognized that a departure was being made from an established policy of offering only a single section of given weight for one being superseded, but because a considerable number of heavy-traffic roads desired a rail having a deeper head than the proposed 132-lb. section, it was decided that both the 132-lb. and the 133-lb. sections should be made available.

The 132-Lb. Section

The last three reports of the Rail committee have included studies relating to the form and dimensions of the webs of the 112-lb. RE and 131-lb. RE rail sections, as the result largely of the fact that stress measurements made several years ago revealed the occasional occurrence of high localized stresses in the upper part of the web and the upper fillets, particularly on the gage side, which were accounted for by eccentric loading of the rail when the wheel bearing comes near the gage corner. In the ensuing investigation, extensive stress measurements were made in the field to determine the frequency of these high stresses with relation to the amount of traffic carried; laboratory tests were made to determine the fatigue strength of the steel in the rail web; and stress measurements were made with rails having various modified web designs to determine the extent that localized web and fillet stresses could be lowered by changes in design.

As a result of this investigation, the rail design shown in Fig. 1, weighing 114.7 lb. per yd. was recommended by the Rail committee to replace the present 112-lb. RE section, the new section having the general proportions of the present 112-lb. RE rail, with the same overall height and base width of 6⅝ in. and 5½ in., respectively, these proportions being considered to be efficient with respect to flexural bending strength and



(Above) Fig. 2—New 132-lb. RE rail section

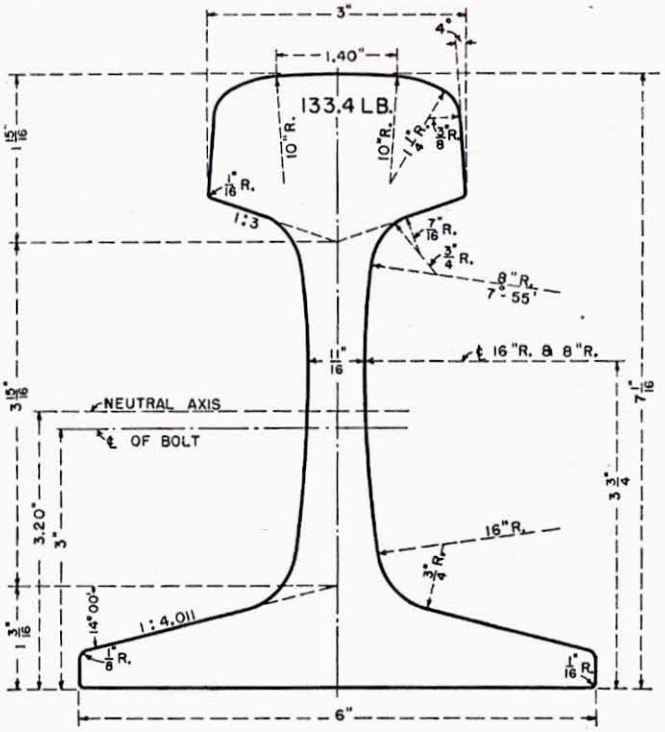
	Area Sq. In.	Per cent
Head	4.42	34.1
Web	3.66	28.3
Base	4.87	37.6
Total	12.95	100.0

Moment of inertia	88.2
Section modulus, head	22.5
Section modulus, base	27.6
Ratio m.i. to area	6.81
Ratio s.m. head to area	1.74
Ratio height to base	1.19

(Below) Fig. 3—New 133-lb. RE rail section

	Area Sq. In.	Per cent
Head	4.74	36.3
Web	3.47	26.5
Base	4.87	37.2
Total	13.08	100.0

Moment of inertia	86.0
Section modulus, head	22.0
Section modulus, base	27.0
Ratio m.i. to area	6.57
Ratio s.m. head to area	1.68
Ratio height to base	1.18



stiffness. Neither test measurements nor service performance indicated that a revision of general proportions was desirable.

Upper Web and Fillet

Measurements showed that for the same conditions of loading, the maximum localized stresses in the upper web and fillets with the 115-lb. design are only 74 per cent as great as for the present 112-lb. RE rail. Considering the fatigue strength of the web steel as 60,000 p. s. i. in compression, a service loading condition which would produce a localized stress of this amount in the new section would produce a stress of 80,000 p. s. i. in the 112-lb. RE section. Since very few stresses of this magnitude were recorded in track with the 112-lb. section, it is believed that the new 115-lb. section offers adequate strengthening of the upper web and fillets.

Other modifications designed to reduce these localized stresses were considered, but none was thought as desirable as the revision recommended. An increase in the depth of the rail head, it was known, would lower the localized stresses, but would require more metal for equivalent results. At the same time, it was known that a decrease in width of the rail head could be expected to reduce the amount of eccentricity of loading. However, it was concluded that this would be undesirable because of the resulting increase in bearing pressure and internal shearing stresses produced by the wheel on a rail of such design, and also because of the reduction in the lateral stiffness of the rail head, and the amount of metal available for side wear on curves.

A slight increase in radius of the lower web fillets is also incorporated in the 115-lb. section. In the tests, high stresses were found in the lower web fillets on curved track where the vertical loads were combined with high lateral loads. These fillet stresses and the longitudinal localized stresses in the rail base over tie plates with rolled-crown rail seats were high enough to cause serious concern.

Head Contour

The head contour of the new 115-section is a modification of that on the 112-lb. section, so that it simulates the normal outline of a rail that has become worn in service. The present 112-lb. contour is subject to heavy bearing pressure and initial flow at the gage corner until it becomes worn to fit the average wheel contour. It is expected that the new head contour will eliminate this initial flow and will delay the development of rail shelling and head checks to some extent. It may also be expected, it is pointed out, to produce more central loading on the rail head, thus reducing eccentricity of bearing and the resulting fillet and web localized stresses.

The lower corner of the rail head in the new 115-lb. design could be eliminated, as proposed by the Rail committee in one of its earlier reports, with a saving in weight of 1.3 lb. per yd. However, these corners were retained because of their advantages in the construction of frogs, switches, crossings, and insulated joints, and in increasing the lateral stiffness of the rail head.

The new 115-lb. rail section can be used only with joint bars of the headfree design. In the service tests and rolling-load tests of various designs of joint bars conducted for the Rail committee, the headfree joint bar gave as good results as the head-contact type of bar in terms of fatigue life, effectiveness of the joints, rate of wear, and amount of joint batter. The headfree design may have some advantage with respect to a lower rate of bolt tension loss and lower resistance to expansion movements of rail ends, but the principal advantage of the headfree design is that its use permits the desired thickening of the upper web and lengthening of the fillet radius.

The new design is based on the results of many service tests of joint bars. It has only a little less moment of inertia and section modulus than the present A. R. E. A. bar design for the 112-lb. rail, but is considerably lighter. It is believed that cracks which have sometimes developed in the tops of joint bars at mid-length are not due directly to sectional properties, because these cracks have also developed in the heaviest designs of joint bars.

In the recommended design of joint bar, the face-to-face distance has been held to a minimum to shorten the span of the bolts between the webs of the two bars of the joint. This will tend to increase the resistance of the bolts to bending and breakage when expansion forces bring the rail web to a solid bearing against the bolts. The recommended design of joint bar for the 115-lb. section will not fit the 112-lb. RE rail accurately, but might be used to join this rail to 115-lb. rail at the ends of relays, etc.

Fig. 2 shows the new rail section superseding the 131-lb. RE rail. This design weighs 132.1 lb. per yard, an increase of 1.3 lb., compared with the 131-lb. section. Substantially the same considerations apply to this revised design as to the 115-lb. section over the 112-lb. section, and the new section has the same over-all height and base width as the section it replaces, 7⅛ in. and 6 in., respectively. With the wider head of the 131-lb. section, it was found possible in the revision to effect a considerable reduction in the maximum stress in the upper web and fillets by introducing compound fillet curves of longer radii and still accommodate head-contact joint bars as well as headfree bars.

Accordingly, new designs of both headfree and head-contact joint bars were developed and adopted for the new 132-lb. section. The head-contact bar may be used with either the new 132-lb. rail or with present 131-lb. rail, and may be used satisfactorily to connect these two rail sections at the end of rail relays, etc. The new headfree joint bar will not accurately fit 131-lb. rail.

Paralleling the development by the Engineering division research staff of the 115-lb. and 132-lb. sections, the Pennsylvania Railroad, having experienced a large number of web failures in 131-lb. RE rail, carried out an investigation of this section and other sections of similar and greater weight. This investigation involved laboratory tests on 14 rail sections, including several experimental sections. The primary development was the Pennsylvania's new 140-lb. PS section, which was designed for use in heavy-tonnage territory on divisions having a preponderance of heavy curvature.

Following the development of the 140-lb. section, the same principles of design were applied to develop a rail of approximately the same weight as the 131-lb. RE rail for use on divisions having less tonnage and curvature, but where tonnage and alinement are still such as to cause rapid head wear and where, due to the development of web failures, a rail of materially greater web strength than the 131-lb. section is desired. The result of this investigation was the 133-lb. rail section shown in Fig. 3, which has been adopted by the A. R. E. A.

The principal difference between the 133-lb. and the 132-lb. sections lies in the greater depth of head of the former. This was obtained at a slight sacrifice in moment of inertia (86 compared with 88 for the 132-lb. section) and of fishing height. The loss in fishing height was partly offset by adopting a head fishing angle of 1 in 3 (18 deg. 26 min.) like the 18-deg. angle of the old 130-lb. PS section. In overall dimensions, the new 133-lb. section has the same base width as the 131-lb. section, 6 in., but is 1/16 in. lower, with an overall height of 7 1/16 in.

Lower Web Stresses

Stresses in the upper part of the web of the 133-lb. rail were found to be materially lower, a condition which is due to the effect of the heavier head in spreading the load over a greater length of web. Both direct stress and bending stress in the web are thereby materially reduced.

A primary advantage of the 133-lb. rail for territory where head wear is a factor is the greater amount of metal in the head, permitting longer life in the first application and providing better rail for relaying after the first application. The thin head of the 131-lb. RE section has been one of its outstanding defects in curved track on heavy-traffic roads. Rail of this section removed from main-line tracks after 12 to 16 years of service has, in many instances, been found to be unfit for relaying in branch-line territory due to the thinness of the head. The 133-lb. section, with 3/16-in. deeper head, is intended to remedy this defect.

Principles of web design similar to those used in the 132-lb. section were applied in the 133-lb. section, including a thickening of the upper portion of the web and the use of an increased fillet radius to reduce stress concentration. The web of the 133-lb. rail is slightly thicker at the minimum section and at the center line of bolt holes than the 132-lb. rail. The base of the 131-lb. rail and the lower web fillet radius are retained in the 133-lb. rail, no trouble having been experienced with these parts of the 131-lb. design.

The top contour of the head is practically the same as that of the 132-lb. section. A side inclination of 4 deg. is introduced in the rail head, giving a slightly narrower top surface of the head, and thus reducing the tendency to eccentric loading.

The greater top fishing angle is expected to reduce the tendency of the joint bars to "freeze," and this, combined with a lower bolt position, reduces the tendency of head-contact bars to "cock."

While there was a preponderance of opinion in the Rail committee in favor of the 132-lb. section because of the advantage of the greater fishing height and the retention of the interchangeability with the present 131-lb. section, and also because the head section and range of web stresses in this section are believed to make it adequate for roads with moderate traffic, a considerable number of the members representing roads confronted with conditions of traffic and curvature that lead to rapid head wear expressed a preference for the 133-lb. section because of its greater head thickness and lower web stresses.

It was recognized that the roads favoring the 132-lb. section were generally those that had had little or no difficulty with the 131-lb. section, while those that had had difficulty with this section were generally favorable to the more pronounced changes of section provided in the 133-lb. rail.

A summary of the advantages of the new 133-lb. section, compared with the 131-lb. section, are as follows:

(1) Twenty-eight per cent lower stress in the top web fillet under eccentric vertical load.

(2) More metal in the head to withstand wear.

(3) Extended life of the rail in the worn condition.

(4) Greater top fishing angle (18 deg. 26 min., compared with 14 deg.), to reduce:

(a) tendency of the bars to cock;

(b) rate of take-up of the bars at the top;

(c) wedging action of the bars:

(5) A slightly narrower running surface, with a corresponding decrease in eccentricity of load.

The new designs of rails and joint bars were examined by the patent counsel of the Association of American Railroads and are said to be clear of infringement of existing patents. Furthermore, it is said that the A. A. R. will furnish patent counsel to handle the defense of any suit brought against a member road for the alleged infringement of any patent which has been issued, or any rail patent which may subsequently be issued, subject to the standing rule that the defendant member road is responsible for damages and profits in the event of unsuccessful litigation. It is considered that none of the designs of rail or joint bars adopted is patentable, it being claimed that prior art discloses the features of the designs to be broadly old.

P. J. Watson Jr. Dies Suddenly

President of Terminal of St. Louis since 1938, he initiated a vast improvement and modernization program

Philip J. Watson, Jr.

PHILIP J. WATSON JR., president of the Terminal Railroad Association of St. Louis (Mo.), died suddenly on November 1, in a hospital in Kansas City, Mo., following an emergency operation.

As president of the Terminal since 1938, Mr. Watson initiated a large-scale modernization and improvement program and directed the road's operations during the recent record traffic period of World War II. Operating one of the largest passenger terminals in the nation, and one that is at the same time both a major East-West and North-South gateway, the Terminal, as a result of the recent inauguration of interregional passenger cars and trains, has been brought to the special attention of railway executives throughout the nation.

The T. R. R. A. is a 376-mile switching road serving the great Illinois and Missouri industrial area in the vicinity of St. Louis, and based on 1944 revenues it is the third largest railway of its kind in the nation. It serves, in addition to the many hundreds of industries located on its rails, as the principal interchange carrier for the 25 railways, and for two of the three barge lines that serve the region, and is, in fact, the only railway offering direct connections with all other rail lines in the vicinity.

Strategic Wartime Role

During the recent war, the Terminal became one of the nation's major gateways through which the flood of war traffic flowed. Situated as it is at the northern terminus of four of the major Southwestern carriers and at an important western terminal of numerous Eastern and Mid-western carriers, St. Louis became a focal point in the movement of petroleum and petroleum products from the Southwest to the Eastern seaboard. A major achievement of Mr. Watson's organization was its ability to effect such prompt interchange of this tremendous volume of traffic that the basic schedule, set up by the Office of Defense Transportation and calling for the departure of the oil trains via the lines of the outgoing road-haul carrier within four hours after arrival on the incoming road-haul carrier, was met successfully, notwithstanding the heavy volume of other traffic then being carried.

In the handling of war-time passenger traffic, as in the handling of freight, Mr. Watson's organization was equally successful. Located at the gateway to the Southwest, the tremendous concentration of military training camps in that area brought an unprecedented volume of passenger travel through St. Louis. Again the organization built by Mr. Watson met the difficult test without failure, as is evidenced by the fact that in December, 1945, the combination of returning servicemen and furlough and Christmas travel led to the Terminal's being called upon to handle an all-time high of 64,000 passenger train cars in the Union Station, a feat that was accomplished without a major delay being charged to the road.

Mr. Watson's Career

Under Mr. Watson's direction the T. R. R. A. undertook a large program of plant improvements, not the least important of which was the purchase, commencing in 1940, of a fleet of 48 Diesel-electric switching locomotives.

Also, virtually the entire signal system of the road has been modernized, and searchlight-type signals have been installed in place of the upper or lower-quandrant semaphores previously in service. Automatic signaling has also been extended so that virtually all main lines are now protected by automatic signals.

One of Mr. Watson's first acts as president of the road was to initiate plans for rehabilitating the 50-year-old Union station. The modernization was completed in 1944. (A description of this work was published in the *Railway Age* of August 26, 1944.)

Mr. Watson was born in Dunkirk, N. Y., on May 24, 1886. He received his education in the schools of New Castle, Pa., the John C. Green School of Science, and Princeton University. He entered railroad service in February, 1903, as a rodman on the Pennsylvania, subsequently serving in that capacity on the Vandalia (now part of the Pennsylvania) and on the Wheeling & Lake Erie. In October, 1906, he became an assistant in the engineer corps of the Pennsylvania, resigning in August, 1908, to accept a similar position on the St. Louis, Iron Mountain & Southern (now part of the Missouri Pacific). Later he served for a short time as a draftsman on the Vandalia, and in January, 1909, he became a transitman on the Chicago & Eastern Illinois. In March of that year he returned to the Wheeling & Lake Erie in the same capacity, later advancing to draftsman and to assistant engineer.

Mr. Watson entered the employ of the Chicago & Alton (now Alton) in September, 1912, as an assistant engineer, and held the position of resident engineer in May, 1917, when he entered the United States Army as a captain in the Engineer Corps, during World War I. Serving first as an engineering officer instructor at Fort Niagara, N. Y., he later became adjutant of the 1st Battallion, 23rd U. S. Engineers, and, on September 1, 1918, he was advanced to major. He served overseas for two years and was decorated with the Croix de Guerre (France) by General Pétain for distinguished service and gallantry in action.

At the close of the war, Mr. Watson returned to his position with the Chicago & Alton, resigning in December, 1919, to engage in the contracting business with C. R. Cummings Contracting Company, Cleveland, Ohio. He re-entered railway service in August, 1921, as superintendent of the Kansas City Terminal, Kansas City, Mo. It was in this position that Mr. Watson's genius for directing the operations of a large switching and terminal property was given its first opportunity to develop with the result that seven years later, on October 1, 1928, he was made general superintendent of the road, and on December 5, 1932, was elected its president. On April 1, 1938, Mr. Watson was elected president of the T. R. R. A. of St. Louis.

Mr. Watson was a member of the American Railway Engineering Association, the Engineers Club of St. Louis, and the Princeton Engineering Association.

Electrical Sections Meet in Chicago

A. A. R. Engineering and Mechanical groups get together after a four-year interval—Railway Electric Supply Manufacturers Association holds exhibit meeting first time in seven years

THE two electrical sections of the Association of American Railroads held meetings in conjunction with an exhibit staged by the R. E. S. M. A., in the Hotel Sherman, Chicago, during the week of October 21, 1946. The Electrical Section, Engineering Division received and discussed seven reports in a busy one-day session, Tuesday, October 22. The Electrical Section, Mechanical Division held meetings on Wednesday and Thursday, October 23 and 24. Exhibits were opened on the morning of October 23 and continued through Friday, October 25, to give railroad men opportunity for looking over exhibits which included much new equipment.

Electrical Section, Engineering Division

Chairman J. M. Trissal, superintendent communication and electrical engineer, Illinois Central, opened the meeting at 9:30 a.m. and called on J. B. Akers, (chairman, Engineering Division, A. A. R.), chief engineer, Southern, who made a brief address. He called attention to the value of adding discussion to the compilation of reports, and to the number of electrical developments brought out during the war. He concluded by saying that management makes policies, but that it remains with engineers to translate these policies into fact.

W. S. Lacher, Secretary of the Section, reported on activities of the Section during the past four years, calling attention to the little publicized work on conservation of materials, black-out lighting and other emergency measures which had been accomplished under the chairmanship of D. B. Thompson, mechanical and electrical engineer, New York Central.

Following a brief discussion of the present status of state codes applying to wire crossings, the Section proceeded with the presentation and discussion of its technical reports.

Power Supply

The report of the Committee on Power Supply described an ingenious testing device which in one minute's time can determine the amount of life remaining in a trainman's hand-lantern battery. It has served effectively to avoid discarding of partially used batteries, and in the discussion it was reported that the Illinois Central spends $53,000 a year for these batteries and that between 25 and 40 per cent of this cost could be saved by means of the test method shown in the report.

One section of the report which deals with power for train communication described methods of supplying wayside power for charging batteries on cabooses when power is taken from the truck axle. It was suggested that this can be done by means of electric welding sets, engine-driven charging sets, or motor-generator sets, with charging outlets at convenient locations, or the use of an energized third rail. Another proposal was to use alternating current to drive the motor-generator sets on the cabooses with raised excitation where such sets are used.

Electric power supply for camp cars is treated in the report. It is recommended that circuits for these cars should be energized only at locations approved by the proper authorities and that wiring be installed in accordance with the National Electrical Code, and that portable cables used for such connections consist of type "S" rubber-covered portable cord with proper plugs and receptacles. They should not be connected to automatic block or highway-crossing signal control circuits.

A comprehensive description of a high voltage distribution system for shop installation is included in the report. Such a system can be used effectively to reduce distribution costs and improve voltage conditions. Discussion developed the fact that one railroad has recently placed in service two trains used by the Signal Department in which the primary source of power consists of gas-engine-driven generators.

A paper on power requirements for Diesel-electric locomotive repair shops was presented as a supplement to the report. It was suggested that in such shops, necessary d.c. power might be obtained by the use of ignitron rectifiers and that electric or oil-fired steam generators might supply the limited amount of steam needed for cleaning filters and other requirements.

For nearly four years, the Committee on Electrolysis has been conducting tests on the electrolytic corrosion of steel in concrete. Steel specimens encased in concrete cylinders of varying thickness, with varying diameters and coatings, were buried in the ground and subjected to a potential of 25 volts d.c.

A new series of tests has been instigated to include various conditions not covered by the original tests. The importance of this investigation is indicated by the fact that such corrosion has necessitated changing out all of the guy anchors used on the Illinois Central electrification.

In discussion of anodic protection of watertanks, one member described a tank which had pitted badly, Each leak was repaired by drilling and tapping the hole and fiting the hole with a pipe plug. After approximately 1,000 plugs had been used for this purpose, anodic protection was applied and corrosion stopped.

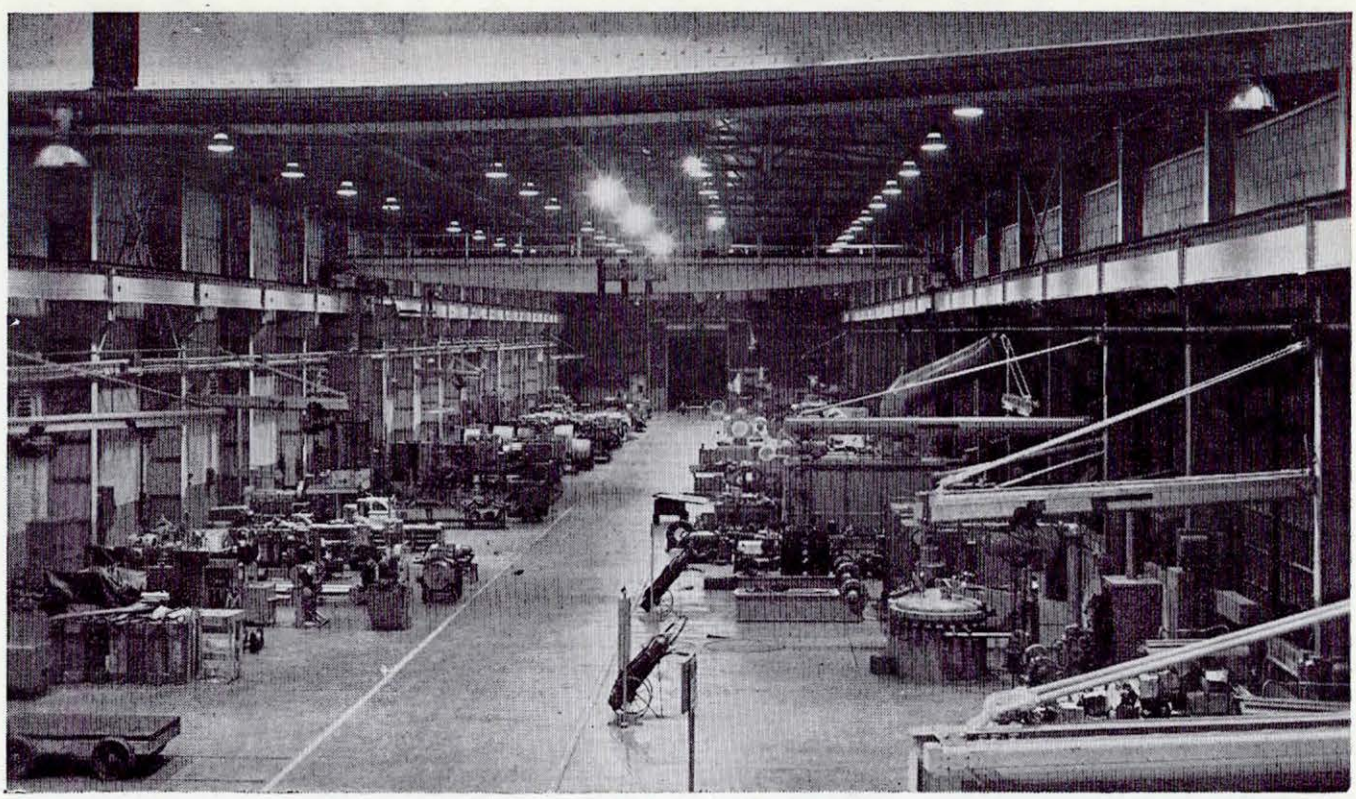
The discussion of the question as to whether or not electric switch heaters should be connected by means of plugs and receptacles, or wired solidly to the supply circuit, brought out the fact that the plug-in type does not find favor among the members.

Illumination

The report on illumination describes recent lighting installations in shops and offices on the Pennsylvania. It is profusely illustrated and shows that, in several cases, illumination levels have been trebled without increasing power consumption.

A description of new lighting in the West Burlington, Iowa, shops of the Chicago, Burlington & Quincy is included in the report,—a night view of the shop, which is painted in dynamic colors, is shown in the illustration. It is lighted entirely by 400-watt high-intensity mercury-vapor units to improve the color of the lighting and to provide for momentary outages or drops in voltage which might cause the mercury lights to be off for a few minutes. Originally values of illumination were from 3 to 5 footcandles. This has been increased to 19 footcandles.

At the request of the Committee, H. H. Helmbright, railway lighting divi-



Night view of the C. B. & Q. Diesel repair shop at West Burlington, Iowa. One of the illustrations of lighting used in the report on illumination

sion, General Electric Company, prepared and presented a paper on lighting which was illustrated with lantern slides. He showed examples of good lighting and outlined means for extending and improving such installations. He called special attention to the still unfinished task of providing means for good lighting in enginehouses. He also called attention to new light sources and suggested the use of germicidal lamps for treating the air in station areas, particularly in rest rooms, wash rooms and waiting rooms.

Safety Devices and Rules

The Committee reported on three assignments having to do respectively with (1) prevention of electric sparks where inflammable materials are loaded, (2) special protection where there is evidence of stray electric currents and (3) provisions required where wire lines pass over oil and gas storage and handling facilities. Work on the first two assignments was limited to revision of the Manual, while that on the third comprises recommended practice that is offered for adoption and publication in the Manual.

Electric Heating

Subjects covered by the Committee on Electric Heating and Welding include electric heaters for track switches, electric heating for wayside water stations, and the protection of exposed water lines by electric heating.

In a discussion concerning heaters for track switches it appeared that the members were generally in favcor of permanent connections and that plugs and connectors were not necessary for this purpose.

The report describes the requirements of protective heating for a power house, employing a 150-gal.-per-minute centrifugal pump driven by a 5-hp. motor. It is accomplished by means of two 1,000-watt space heaters.

The latter part of the report describes an emergency means of preventing freezing in a water pipe by passing alternating current through the pipe.

Track and Third-Rail Bonds

The report states that less damage to bonds is caused by building up rail ends with electric, rather than gas welding, that a wet asbestos pack constitutes effective protection, but is seldom used, that in practice, removal of the bond, if of the signal type is the only certain method of preventing injury. The Section has adopted the mechanically applied rail-head type bond for track circuits carrying return propulsion current. A drawing covering specifications for this bond is included in the report. It shows a single bond at the rail connection and discussion, which met with general approval, showed how this could be modified to provide for double bonding.

Indoor and Outdoor Substations

The major part of the report of the Committee on Substations consisted of a description prepared by H. F. Brown, engineer, electric traction, New York, New Haven & Hartford, on recent circuit breaker and protective relay changes on the New Haven electrification. By making changes to its existing circuit breakers, at a cost much below that required for new breakers, the railroad has been able to isolate faults entirely by means of instantaneous relays.

Electrical Section, Mechanical Division

The 1946 Annual Meeting of the Electrical Section, Mechanical Division, Association of American Railroads, was called to order at 9:30 a.m., October 23, 1946, by Chairman L. J. Verbarg, air-conditioning engineer, Missouri Pacific. He reviewed recent railroad history affecting the electrical department, with emphasis on work delayed by war, and developments made possible by basic engineering improvements created under pressure of war. He also announced the election of the following officers: Chairman: G. E. Hauss, electrical supervisor, Baltimore and Ohio; First Vice Chairman: J. E. Gardner, electrical engineer, Chicago, Burlington and Quincy;

Second Vice Chairman: L. S. Billau, electrical engineer, Baltimore & Ohio; Secretary: J. A. Andreucetti, chief electrical engineer, Chicago & North Western; Committee of Direction: M. A. Pinney, assistant electrical engineer, Pennsylvania; L. C. Bowes, electrical engineer, Chicago, Rock Island & Pacific.

Secretary J. A. Andreucetti reported on Association work carried on since the last meeting, which was held in 1941.

Rolling Stock

An investigation made by a subcommittee on Diesel-engine lubricating-oil reclamation disclosed that, out of a total of 42 railroads, 21 make a practice of refining crankcase drainings, 7 recondition the drainings, 13 use the drainings for other lubrication purposes, and in one case they are discarded.

Many oils contain additives which are removed in reclamation, and in some cases, an additive concentrate is mixed with reclaimed oil. The question was raised as to what kind of results are obtained when additives are not restored, and a request was passed on to the committee to include this question in its future work. Further study of the subject is recommended.

The subcommittee reporting on the reclamation and reconditioning of Diesel engine parts recognizes the importance of retiring some of the older types of locomotives which require an excessive amounts of parts reclamation and which cannot readily be adapted to standardized maintenance. The report describes the reconditioning of wearing parts which are being regularly reclaimed by generally accepted methods.

In the discussion of this section of the report, one member said that most railroads are now returning parts to manufacturers for reclamation and that railroads should as quickly as possible establish shop facilities for doing reclamation work in their own shops.

Recommended sinzes of batteries and compartments are offered for inclusion in the manual, in substance as follows:

For all future Diesel-electric locomotives in switching service using Diesel engines of 600 hp. and larger, storage batteries having nominal capacity not less than 260 amp. hours at the 8-hour rate with 1.250 specific gravity are recommended.

For all future Diesel-electric locomotives in road service using Diesel engines from 600 hp. to at least 1,500 hp. storage batteries having nominal capacity of not less than 420 amp. hours at the 8-hour rate dith 1.250 specific gravity are recommended.

Batteries should have at least 1½ in. operating range of electrolyte level. Inter-cell connections should be burned on and inter-tray connections should be insulated flexible copper cable with lead-plated lugs, bolts and nuts.

Because of variations of builders' designs, it is considered impracticable to specify width and depth of battery boxes, but it is recommended that those on both switching and road locomotives be large enough for a 420-amp.-hour battery. The height of boxes served from the side should be at least 22 in. and preferably 25 in. When served from the top, the height may be reduced to 19¾ in. if the service open is large enough to permit free access to all cells.

The boxes should have outside ventilation, should drain freely and be easily accessible for washing.

Discussion of this section developed the fact that members were generally in favor of the larger sizes of batteries recommended and that they wish to have as much height above boxes and as much ventilating space as circumstances permit. It was pointed out by one member that a railroad which now uses a large number of the smaller size batteries for its switching engines would not be justified in changing to a larger size.

The report suggests a special transformer for supplying standby power to locomotives in shops or engine terminals. This would prevent undue drain on the battery.

A sub-committee on new developments has included in the report, brief descriptions of the following recently developed equipment: 1,500-hp. single-engined locomotive units developed respectively by the American Locomotive Company, the Electro-Motive Division of the General Motors Corporation; and the Ingalls Shipbuilding Corporation; a 3,000-hp. two-engined unit built by the Baldwin Locomotive Works; a 2,000-hp., single-engined unit produced by Fairbanks Morse & Company; electrically driven auxiliaries developed by four locomotive manufacturers which improve control and eliminate belts and a new 3,000-lb. steam generator made by the Vapor Car Heating Compny.

Another sub-committee offers as information a list of shop facilities and a procedure schedule for overhauling electrical equipment of Diesel-electric locomotives.

The committee feels that some form of improved indicator is vitally needed to show load on Diesel-electric traction motors. Load on the electrical equipment of a locomotive is usually indicated by ammeters, but these do not show equipment temperatures. On the other hand, thermocouples which indicate temperatures do not show load.

It was thought by one member that if all locomotives were equipped with both voltmeters and ammeters, it might provide the enginemen with better means of avoiding conditions which might damage motors and generators.

In the discussion of the report, the opinion was expressed that 200,000-300,000-mile motor overhaul period, suggested in the report, was in some cases unnecessarily short and that it might soon be considerably extended. This was thought to be possible, but not something that could be done quickly. Bearings were given as the usual reason for removing traction motors. It was said that if bearings can be improved, the overhaul periods may be extended. One member favored oil-lubricated bearings, believing that they will materially extend overhaul periods. Another said that trucks are taken out for wheel wear, and another said that his railroad is having trouble with both coils and bearings. He did not believe the overhaul figure would soon reach 300,000 miles.

Electric Welding

The first section of the report describes an electric-arc stud welder for end-welding studs to other metallic objects. The process involves a special gun which automatically controls the arc generated between the stud and the plate. The effect of the human element is reduced by this process and inexperienced people can perform very satisfactory stud-welding operations.

The report describes jigs as devices for holding assemblies while they are tack welded or completely welded and positioners which allow an assembly to be moved to any position to permit downhand welding of all connections. Concerning their value, it states that jigs and positioners have become indispensable in connection with the construction of welded assemblies and for the welding of broken and worn parts from locomotives, cars, etc.

The third section of the report describes high-speed or precision Oxy-acetylene cutting tips which allow about 30 per cent greater cutting speed than standard tips.

The fourth and major part of the report describes an electronic tracing device for machine gas cutting. The motors which guide the cutting head are controlled by a photo-electric device which moves with the head as it follows a black and white drawing. The cutting speed is controlled by a tachometer. This method of cutting is accurate and fast, employs a low-cost template (drawing) which can be changed easily and which may be used any number of times.

The fifth section of the report describes "cascade" and "trailer" systems of oxygen supply. Many users of oxygen employ manifolds, supplied by a number of oxygen cylinders,—the oxygen being piped from the manifolds to the points where it is used. The cylinders are replaced periodically as their contents are used.

The "cascade" system employs similar

manifolds and cylinders, but the cylinder pressure when reduced to a predetermined value is restored periodically by a truck which carries it in liquid form, converts it to gas and pumps it into the manifold. All cylinder handling is eliminated.

With the "trailer" system the oxygen is delivered to the user by truck trailers which are made in three sizes, namely, 10,000, 20,000 and 40,000 cu. ft.

The sixth section of the report discusses the potentialities of a new development in cutting cast iron which makes use of the combination of the electric arc and oxygen. In operation, the oxygen is delivered through the bore of a hollow electrode and at the same time the arc is maintained to provide a puddle of molten metal which is instantaneously oxidized and pierced by the jet of oxygen.

Tests indicate that in cutting cast iron the speed of cut is approximately three times as fast as cutting with oxy-acetylene.

The report on welding was amplified by Chairman L. I. Grant, engineer of tests, Chicago, St. Paul, Milwaukee & Pacific, with a statement which in substance was as follows: Welding is a matter of extreme importance to the railroads. Insofar as its application to repair work is concerned, it originated on the railroads, but the railroads have not retained leadership. This is due in part to mistrust of the process handed down from the results of some early applications. If it is to be used to full advantage, many of the cut-and-try applications must be replaced by engineering and the training of supervisors which will assure effective application and procedure control.

Air-Conditioning

Concerning the development of new equipment, this report states that in cars where smoking is permitted, some means must be provided to remove the smoke and attendant objectionable odors, or otherwise provide space where smoking is permitted.

In kitchens, the report states that the trend is to provide separate ventilating systems completely independent of this air-conditioning system.

In developments now in progress, railways and manufacturers have placed special emphasis on the need for more uniform control of both temperature and humidity, reduction of weight, simplified maintenance requirements, and the development of new basic units to provide air cooling. One answer to the latter requirement is the replacement of the so-called package unit by the three-piece system consisting of an overhead evaporator, a separate condenser, and a separate compressor unit.

Three electronic air filters are described in the report. The potentialities of such filters are that they can effectively remove dirt including all tobacco smoke and will also eliminate bacteria in the re-circulated air.

Reheating of the cooled air, it was stated, is the only practical way of effecting satisfactory humidity control during the cooling season. Under moderate weather conditions, this can be accomplished with the compressor running at a reduced speed.

Concerning the need for uniformity and simplification of controls, the report states it is desirable to consolidate the temperature control in a single switch having three positions, i. e., "Day," "Off," "Night."

Concerning filter fires, the committee emphasized its opinion that the best preventative of fire in air-conditioning filters is cleanliness. Weekly cleaning of filters, it is stated, will eliminate the hazard.

The report refers to several types of liquid deodorants which have been marketed stating that these were either of the "perfumed" masking type or the desensitizing type that deaden the olfactory nerves, thereby affecting the sense of smell. There were likewise produced several devices that seemed to eliminate odors through the process of "ozonating" or "ionizing" the air. These methods appeared to aid in the control of odors, but they are not producing the effectiveness necessary and desirable.

It is generally agreed that adequate cleaning of coils and ducts with plenty of fresh air will eliminate odors, but with limited cooling capacity it is frequently impractical to introduce a sufficient amount of fresh air. The report concerning this situation states that the amount of outdoor air that is ordinarily provided in a railway car is more than ample for oxygen replenishment. The need is not for more oxygen, but for fresh air, that is, air that is uncontaminated or free of odors. Research conducted by the Navy proved that an air supply of one cu. ft. per min. per person supplies more oxygen than is actually needed. Air is stale when it has an accumulation of odors, but not because it lacks oxygen. In other words, air is not really bad, it only smells bad.

Air purification by carbon is a fairly recent development in air conditioning. Reference to odor elimination in this report is concluded with the statement that to date, this method of odor control seems to give the most promise of effectiveness.

For the purpose of food preservation the report states that mechanical refrigeration can be used to replace ice in the preservation of food in dining cars and buffet sections of lounge or observation cars. It is very important that the electrical load be reduced to a minimum, and to accomplish this end, the refrigerators should be provided with insulation approximately 5 in. thick in the walls.

Relative to drinking-water cooling, the report specifies that units for coach service should have a capacity of approximately three to four gallons per hour cooled from 80 deg. F. to 50 deg. F. with an ambient air temperature of 90 deg. F. on the condenser. On dining cars, this capacity should be increased to approximately 15 to 16 gallons per hour and the unit arranged as a tank type cooler with two or more pressure type faucets.

Car Electrical Equipment

The committee has investigated the Excel drive, 450 of which are in service, for the most part, on Canadian railroads. The drive consists of split axle-mounted, twin gears or sprockets connected by chains to a jack shaft which in turn drives the generator through bevelled gears and a splined shaft. Drives in service for 3 and 7½ kw. generators have accumulated mileages up to 250,000. A large type drive now under construction is designed to operate 25-kw. generators. The principal advantage of the drive is that it can be applied to the axle without removing the wheel.

A new product described in the report is a variable frequency inverter for application where fluorescent lighting and razor outlets are the only devices that require a. c. power on a car.

Another innovation which is being applied to 300 passenger cars consists of an amplidyne booster inverter which in these applications provides the alternating current for all equipment on the car except the compressor motor.

Diesel engine generator sets for supplying all of a car's requirements, including heating, air conditioning and lighting, were described in the report and discussed at some length. These included a few which have been in service for a period of time and two new developments. Proper methods and types of equipment for making lighting measurements were described and discussed and it appeared that the members were agreed that such measurements should be taken.

The nickel-cadmium storage battery which is now being developed for manufacture in the United States, is described in a section of the report prepared by the manufacturer. Advantages claimed for these batteries are long life, low operating cost, no swelling or buckling, no internal resistance, ability to operate over wide temperature ranges, permissible high discharge rates, immunity to damage by complete discharge.

Railroad reports voiced the need for a sealed type eight-ton refrigerating unit which could be operated with an a. c.

motor through the medium of an amplidyne inverter. The design of such a unit apparently involves some basic difficulties, but it was suggested that the railroads should ask the manufacturers to undertake the development of a sealed compressor for an eight-ton unit.

The opinion was expressed that the railroads have reached the limit of axle power with 30-kw. generators. Car requirements demanding generators of this size and larger are the reason for increasing interest in individual Diesel power units.

Radio and Communication

A list of railroads which are actively engaged in testing train radio or inductive communication equipment or which are proceeding with permanent installations is given as follows:

Railroad	Inductive: Yard or terminal	Inductive: Road	Radio
Atlantic Coast Line	—	X	—
Atchison, Topeka & Santa Fe	—	—	X
Bessemer & Lake Erie	—	X	—
Baltimore & Ohio	—	—	X
Chicago, Burlington & Quincy	X	—	X
Chicago, Milwaukee, St. Paul & Pacific	—	—	X
Chicago, Rock Island & Pacific	—	—	X
Denver & Rio Grande Western	—	X	X
Florida East Coast	—	—	X
Gulf, Mobile & Ohio	—	—	X
Great Northern	X	—	—
Jacksonville Terminal Co.	—	—	X
Louisville & Nashville	X	—	—
Missouri Pacific	—	X	X
Norfolk & Western	X	—	—
New York Central	—	—	X
Pennsylvania	X	X	—
Pere Marquette	—	—	X
Seaboard Air Line	—	—	X
Terminal R. R. Assn. of St. Louis	X	—	X
Union Pacific	—	—	X

The rapid increase in use of inter-car train-line circuits for purposes of entertainment or communication in recent years brings about a need for a standard plug and receptacle to connect adjacent cars in a train. The growth of interchange of cars as more through routes are established further accentuates this need.

This subject was discussed at length to ascertain the opinion of the membership concerning possible standardization and the question was referred back to the committee for further study.

An investigation made by a subcommittee showed that power requirements for train communication average 120 watts continuously and that an intermittent transmitting load of 347 watts average. On steam locomotives this can be supplied by turbo-generators, and on Diesel locomotives from the auxiliary power circuits. On cabooses, it requires storage batteries with or without axle generators, or some form of internal combustion engine driving a generator.

If a 500-watt, 117-volt, single phase, a. c. turbo-generator is applied to a locomotive for furnishing the necessary power, the report estimates that the cost will be $360 per locomotive. If a new dual voltage turbine is used, the cost is $460 per locomotive.

If the existing turbo-generator has sufficient capacity, converter equipment may be supplied as follows:

Conventional non-self regulating rotary converter	$232 per loco.
Self regulating type rotary converter	302 per loco.
Vibrator type inverter	185 per loco.

Inquiries made by the committee concerning the adequacy of power supply on Diesel-electric locomotives indicate that road locomotives have ample capacity, while switchers have little or no excess power. In general, there appear to be no particularly difficult problems in application of communication equipment to Diesel locomotives. The power requirements should be reduced as developments continue, permitting application to locomotives with little excess auxiliary power.

Estimated cost of providing power-supply equipment on switch engines and single-end road engines is $250 per locomotive and on double-end road engines $400 per locomotive.

The estimated cost of equipping a conventional caboose with complete power-supply equipment for operating a 117-volt, single-phase, alternating-current communications equipment, is as follows:

With axle generator, lead batteries, non-self regulating converter, and all wiring	$1,311.00
With axle generator, lead batteries, self regulating converter, and all wiring	1,600.00
With axle generator, lead batteries, vibrator type inverter, and all wiring	1,270.00
If Edison batteries of equivalent capacity are used add $210.00 to the above.	
No axle generator, lead batteries, non-self regulating converter, and all wiring	801.00
No axle generator, lead batteries, self regulating converter, and all wiring	1,090.00
No axle generator, lead batteries, vibrator type inverter, and all wiring	760.00
If Edison batteries of equivalent capacity are used add $210.00 to the above.	

No cost figures have been obtained for the internal-combustion engine generator type of power-supply equipment, but these will be included in a later report.

Decorative Plastic Fabric

Lumite is the trade name applied to plastic fabrics woven of Saran by the Chicopee Manufacturing Corporation of Georgia, 47 Worth street, New York 17. It is available in decorative fabrics for transportation seating upholstery, and is said to be suitable for this application because of certain characteristics of the fabric. Among these are long life and the ability to take hard wear in connection with maximum resistance to spotting and the ravages of accumulated dust and dirt; the facility with which the fabric is cleaned and the absence of ill effects from such cleaning, either with soap and water or with special cleaning fluids; the porous nature of the fabric which provides ventilation for dissipation of body heat; and the availability of a full color range, in various weaves and designs, for maximum style and beauty.

Saran, from which Lumite is woven, is the generic name applied by the Dow Chemical Company, Midland, Mich., to its line of vinylidene chloride polymers. Derived from petroleum and brine as its basic raw materials, it is a thermoplastic. Various polymers and copolymers with a wide range of softening points are possible but the commonly used polymer has a softening point in the 240-280 deg. F range.

It has high tensile strength, low water absorption and is chemically inert. At room temperature, Saran is extremely resistant to all acids and all common alkalies except concentrated ammonium hydroxide. It is substantially unaffected by all solvents other than those oxygen-bearing ones, such as dioxane and cyclohexanone.

Saran is odorless, tasteless and non-toxic. A light amber in its natural state, it is readily pigmented and its high refractive index enhances the colors so obtained. These colors are permanent, neither light fugitive nor affected by abrasion. Although Saran is a thermoplastic and will melt upon the application of excessive heat, it will not support combustion and is thus classified as incombustible.

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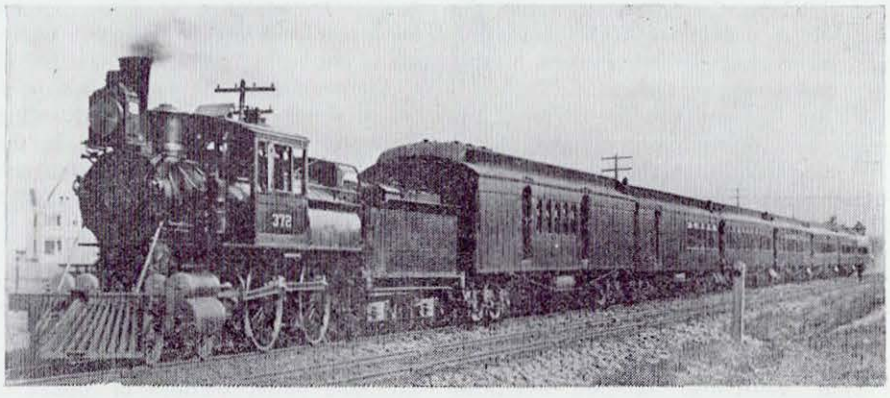


Photo from W. A. Lucas

The Erie's "New York and Chicago Express" at Paterson, N. J., in 1897

Modern material handling equipment is playing an important role in expediting the loading and unloading of material and supplies at the Omaha stores of the Union Pacific

Mechanized Equipment Speeds Deliveries

Through the use of modern material handling devices the Union Pacific's Omaha stores have achieved better utilization of storage space and eliminated bottlenecks in loading and unloading cars

TO assure proper operation and maintenance of its locomotives, cars, buildings, bridges, tracks and miscellaneous equipment, the Union Pacific purchases materials and supplies in excess of $83,000,000 annually. This huge buying list comprises more than 85,000 items, many of which must be purchased far in advance of actual needs.

The buying and storing of materials in such quantities requires endless planning in the placing of purchase orders and scheduling delivery dates, quantities to be delivered and points of delivery. To handle this large amount of materials and supplies efficiently the U. P. has established a general store at Omaha, Neb., to serve as a distributing point for materials purchased in eastern markets, although carload shipments are made direct from suppliers to all stores where quantities warrant. Another large material distributing point is Pocatello, Idaho, which serves the western district of the Union Pacific System.

The main storehouse at Omaha like many of its auxiliary buildings was built in 1902 of brick and concrete construction. It consists of two stories, is 288 ft. by 50 ft. in plan, and has platforms at car floor level on the east and west sides and ramp and runways on the south side which permit the extensive use of mechanical material handling equipment in the loading and unloading of cars. The north end of the first floor contains the offices of the assistant general storekeeper, storekeeper and office staff of 37 employes. The south end of the first floor and the entire second floor are used for storing thousands of miscellaneous items that comprise railroad storehouse stock.

In addition to supplying the eastern district of the U. P. system, this material storage point also furnishes supplies for the extensive car and locomotive repair shops located nearby. To accomplish this, an average of 755 inbound and 762 outbound material cars are handled monthly. To assure accurate material control and to avoid congestion of platforms and loading docks the stores department has devised a system of material handling that utilizes mechanical equipment to a large extent.

Miles of Concrete Roadways

The various buildings and material storage points throughout the shops are connected by a system of concrete roadways, all leading by direct routes to the main storehouse. Serving these various buildings and storage points are 9 towing tractors, 3 fork lift trucks, 2 low lift trucks, 6 high-low lift trucks, 1 tractor crane and 14 automotive trucks. All this equipment is under the supervision of the stores department, and all repairs and maintenance are

Left—Heavy-duty lift truck, powered by a 50 h.p. six-cylinder engine and capable of attaining speeds ranging from 1 to 7¼ m.p.h. forward and 1 to 6¼ m.p.h. in reverse, permits full utilization of storage space and fast loading and unloading of water treating chemicals and many other heavy materials. Below—Partial view of a Union Pacific material storage yard showing skids being loaded for shipment to some of the railroad's on-line stores

taken care of in a special garage, which handles the inspection and repairs of all material handling equipment. The garage is staffed by 1 head mechanic, 3 machinists and 2 helpers. Adequate tools and equipment are available to make both light and heavy repairs to all types of material handling equipment, and sufficient stocks of spare parts are maintained to make emergency repairs whenever necessary.

Each item of mechanized equipment has a regularly assigned operator, who is responsible for inspecting his machine prior to beginning his tour of duty. In case his inspection reveals a need for repair or adjustment, it is noted on his report and forwarded to the garage, where arrangements are made for future correction. For emergency repairs, the machine is driven or towed directly to the garage for prompt attention.

Careful Planning Necessary

The unloading of an average of 755 cars of supplies each month requires careful planning to avoid overcrowding of platforms and storage space. These operations have been closely studied by the stores officials, and a system installed which permits the unloading of these cars without interference with the regular storehouse routine. Large units are removed directly from the cars by lift trucks and tractor trailer trains and delivered to the various storage points. To expedite the handling of smaller supplies and packaged material, the U. P. has 8,000 steel skids, 1,000 of which are in general use at the Omaha general stores and shops. When loaded, these skids are delivered to point of storage by lift trucks and tractor trailer trains.

The 14 automotive trucks play a vital role in keeping the material moving, especially in hauling pipe, lumber and other heavy materials too long or too heavy for skid loading. They are also used extensively for transporting skid-loaded material over the longer hauls within the shops and stores grounds.

In replenishing stocks of the outlying stores, supply train service is maintained, affording service every 60 days. One month the supply trains are operated from Council Bluffs, Iowa, to Ogden, Utah, and the following month they supply stores between Omaha and Denver, Colo., via Kansas City, Kan.

All materials and supplies required for regular maintenance are delivered by these trains and all scrap ready for shipment is picked up at the same time. Personnel of the supply trains consists of a storekeeper, five helpers and a chef-porter, in addition to a full train crew. A ten-ton derrick crane is assigned to the supply train to speed the unloading of material and the loading of scrap.

In supplying the more important stores, where a large volume of material is required, such as Pocatello and Cheyenne, Wyo., daily supply service is maintained. These stores requisition their material on the regular form, which is sent to the eastern general stores daily. The material requested is loaded in Class A cars and handled in fast train service to avoid delays.

Lift trucks play an important part in loading material for all outbound shipments, but they are especially helpful in loading the daily cars for Pocatello and Cheyenne. This material is delivered to Cheyenne, a distance of 500 miles, in less than 24 hr. and cars must be delivered on schedule to permit uninterrupted operation. The material is loaded on skids which are placed in the freight cars by lift trucks and much of the bulky material is also handled by these trucks.

The Union Pacific purchases approximately 4,000 car wheels each month for

Right—Two-ton capacity lift trucks are also helping speed the movement of numerous types of express, freight and baggage shipments. Below—Lift trucks are used throughout the stores and shops in transporting and tiering heavy loaded skids. Hydraulic pump permits raising the load 8 ft. 8 in. in ¼ min.

replacement. These wheels, which weight between 650 lb. and 850 lb. each, are received in carload lots of 90 to 120 wheels in each car. They are stacked lengthwise of the car, 3 rows in each end. This loading arrangement makes it possible for lift trucks, equipped with special steel prongs, to load and unload the wheels without the assistance of hand labor.

Speeds Wheel Handling

The cars containing wheels are spotted on two depressed tracks with platform at car floor level, so the lift trucks can run in and out of the cars. The lift trucks used for unloading and loading the car wheels have a specially designed steel prong which slips through the axle-hole. Its capacity is four wheels at one time. The wheels are delivered by the lift trucks directly to the wheel boring machines. On the return trip the lift truck picks up wheels that have been removed from axles and delivers them to the wheel storage platform, or, after a car is partially unloaded, directly to the car which delivered the new wheels for return to the foundry.

In addition to speeding the unloading of wheels by direct pick-up and delivery at point of use, other advantages derived from the use of these lift trucks include a substantial decrease in minor accidents and a decrease in physical strain on the workmen. These features have combined to bring about a marked drop in absenteeism.

Lift trucks likewise eliminate much hand work in loading and unloading chemicals used in treating locomotive boiler water, that is, lime, soda ash and sodium aluminate. They are delivered to the stores in carload lots. Lime is delivered in lots of 1,200 to 1,600 50-lb. bags; soda ash, 800 100-lb. bags per car; and sodium aluminate in lots of 800 100-lb. bags.

In the unloading operation, the bags are stacked on wooden pallets, which are placed on top of standard material skid runners, and moved from each end of the car to the doorway by use of a hand lift truck. The lift truck is then driven up to the center of the open car door, the forks are inserted under the pallet, the truck is backed away and the loaded pallet delivered at the point of storage. While the lift truck is depositing its load in the storage room, workmen in the car load another pallet and place it in the doorway for pickup.

In shipping chemicals to the water treating plants, much the same system is used in loading that was used in the unloading operation, except that hand labor is used in placing the bags on the pallets. When placed in the storage room the material remains on the pallets to expedite loading at the time of shipment and unloading at the treating plants.

Shops Utilize Lift Trucks

Many accessories used in repairing cars and locomotives are manufactured in the blacksmith and forging shops. These include grabirons, brake connections, levers, pins, brackets, etc. Material used in their manufacture is delivered by lift truck and tractor trailer trains from storage yards. In the manufacturing process it is heated, forged and cut to the desired shape and length. As these operations are completed it is deposited in steel skids and delivered by lift truck to the machines where it is finished, and after completion it is again placed in the skids and delivered to the storehouse for shipment to shops and on-line stores.

Mechanized methods of handling baggage, mail and freight also have been adopted at the Omaha freighthouse and the Union station.

Both tractors and lift trucks are utilized; the former for handling loaded trailer trains, and the lift trucks for handling large material and pallet loading of miscellaneous items.

A Pennsylvania freight conductor uses the new "Carryphone" portable telephone to keep in touch with his engineman while making a routine inspection of his train. The "Carryphone" operates in conjunction with the inductive train telephone system installed by the Pennsylvania on 1,056 miles of main tracks between Harrisburg and Pittsburgh, and on the Belvidere-Delaware branch in Northern New Jersey

Carryphone in Service on Pennsylvania

Portable inductive telephone permits trainman or other employees to talk from any location with train, wayside points or other Carryphones

By W. R. TRIEM

General Superintendent of Telegraph
Pennsylvania Railroad

ROUNDING out its inductive train communication system perfected after years of cooperative activity with the Union Switch & Signal Company, the Pennsylvania recently placed in service a portable unit called the Carryphone.

The Carryphone is a portable inductive telephone set for use of trainmen and other employees, primarily as an adjunct of the inductive trainphone system which is now in regular use between Trenton, N. J., and Phillipsburg, N. J., on the Belvidere Branch of the New York Division, and between Harrisburg, Pa., and Pittsburgh, Pa., on the Middle and Pittsburgh Divisions of the Pennsylvania. This new telephone apparatus, similar in many respects to a "walkie-talkie," but employing induction instead of space radio, is also suitable for many purposes not involving use of the existing train communication systems. It is expected to be found valuable on wreck trains and work trains where the operation of derricks and machines of various kinds must be coordinated and directed from one location on the ground, as well as in many other fields of railroad operations.

In the *Railway Age*, February 12, 1944, progress in development of an inductive train telephone system then on trial on the Belvidere Branch of the Pennsylvania was described. At that time, joint development and experimentation in the field of train communication by the Pennsylvania and the Union Switch & Signal Company, had produced a workable inductive telephone system, employing 5,700-cycle current and amplitude modulation. Later in the same year, trials of a system employing 88-kilocycle and 144-kilocycle frequencies, with frequency modulation, warranted its adoption in place of the earlier one. Trials and development work on the branch line with the new scheme have continued, and together with the large-scale experiment on the four-track main line of the Pennsylvania, between Harrisburg and Pittsburgh, has produced a train communication system satisfactorily meeting railroad requirements. Today, about 300 locomotives, 100 cabin

cars and 16 wayside stations are in regular service on 1,056 miles of main tracks.

The Carryphone embodies features of the parent system, and operates on 88 kilocycles, one of the frequencies of this two-frequency system. Just as the inductor loop on the locomotive and cabin car creates a magnetic field, inducing currents in adjacent wire lines and tracks, so does a small 30-in. loop on the Carryphone perform the same functions on a smaller scale. In like manner, the receivers on the locomotives and cabin cars are provided in miniature in the Carryphone.

Features of Design

Details of design of the Carryphone are: Cabinet, size—16½ in. long, 12¾ in. high, 4⅞ in. wide. Inductive loop—5 turns, ¼-in. tubing, 30 in. in diameter. Weight—29 lb. Power—Two storage batteries: 6 volts and 2 volts. Capacity—45 minutes' transmission, or 6 hours' reception; approximately 2 hours' ordinary service. Transmitter output—2.5 watts. Telephone—Hand-set with "push-to-talk" button. Volume control—Automatic. Range—Carryphone to Carryphone or train—2 to 3 miles. Carryphone to wayside station—10 to 15 miles.

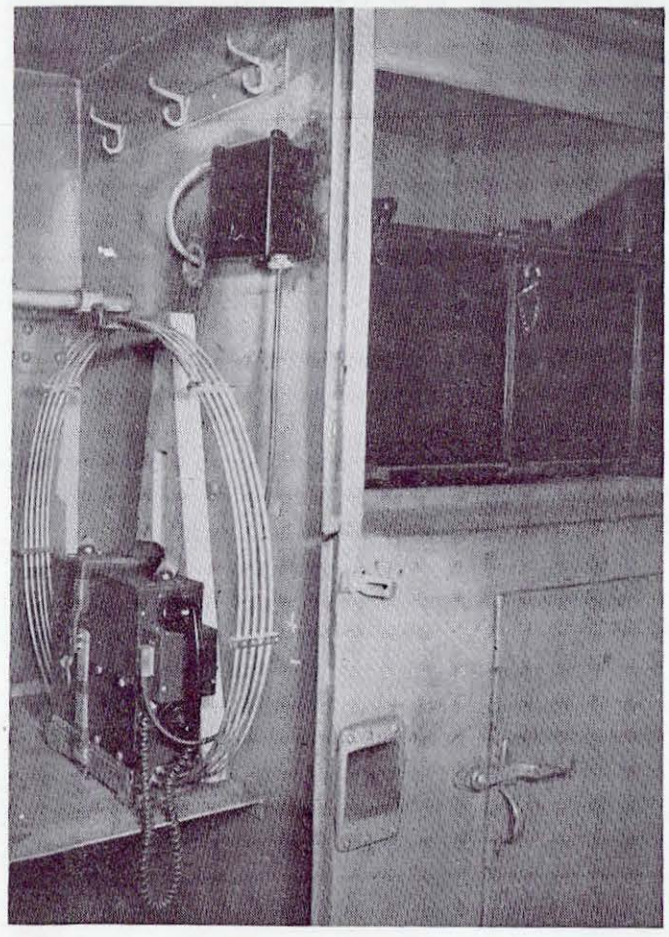
The Carryphone apparatus is installed in the cabin car for the use of the train crew. When placed in the receptacle provided for it, the batteries of the Carryphone are automatically connected with the batteries serving the larger trainphone systems; thus, the Carryphone is always charged and ready for service.

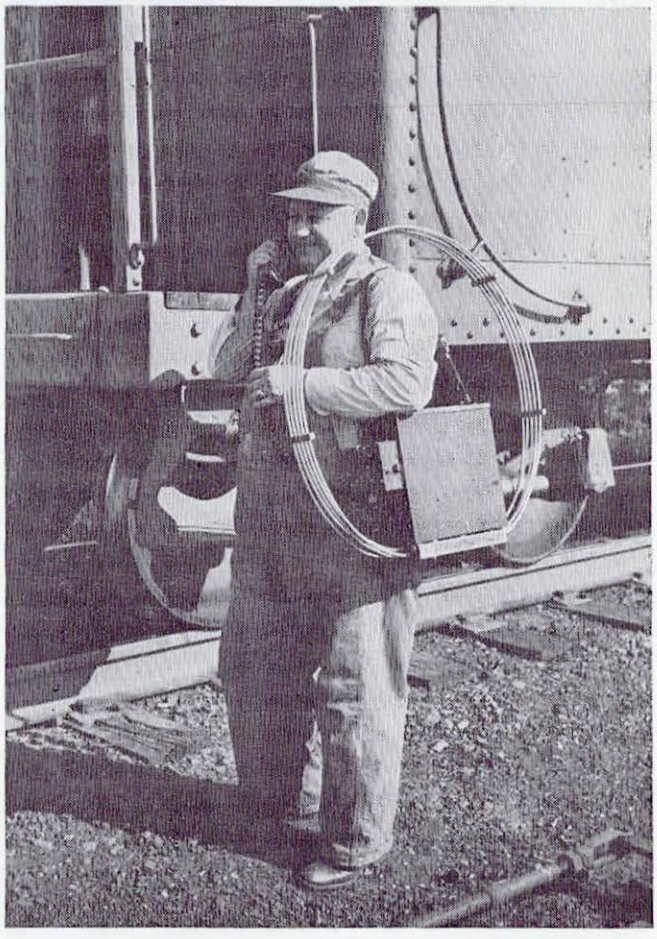
The operation of the Carryphone is in no wise dependent upon the trainphone apparatus on adjacent cabin cars and locomotives. It works as an independent unit of the trainphone system; in fact, an employe with a Carryphone may drop off of a train anywhere, and while the train proceeds on its way, he may communicate with wayside stations and his train and other trains in his vicinity.

The Carryphone is suspended at the side of the operator by a shoulder strap, the telephone hand-set being thus readily removed and replaced while walking or standing. To use it, all that is necessary to establish contact with a station is to remove the telephone hand-set from the side of the cabinet and broadcast the name of the station called. When the station responds, telephone conversation is conducted by the push-to-talk method, similar to the trainphone on trains. Carryphone works satisfactorily at distances up to about 100 feet from pole lines.

A Convenient Tool

Train crews find the Carryphone to be a convenient tool, and use it frequently. For example, a hot box on a car in the middle of a train having been reported to the conductor and engineman of a train by trainphone, it was agreed between them on the trainphone that the train should be stopped at once, and the conductor make an inspection. The conductor, taking the Carryphone with him, found the condition of the journal such as to require the car to be set off,





Left—The "Carryphone" in place in a Pennsylvania cabin car. When resting in the special receptacle prepared for it, its tiny storage batteries are automatically connected with the larger batteries of the cabin car train telephone unit, and are kept fully charged. Lifted out of the receptacles, it is ready for independent use. Right—The new "Carryphone," weighing about 29 lb., has a range of up to three miles when used to communicate with another "Carryphone" or with a train equipped with the train telephone, and of up to 15 miles when used to call a wayside control tower. The loop, consisting of five turns of ¼ inch metal, is 30 in. in diameter and provides means by which messages are received and transmitted by induction, using the track and wayside pole lines as channels

and so advised the engineman directly on the Carryphone. The car was set off, train reassembled, and it was able to proceed without delays which otherwise would have been incurred without this newest method of communication.

A number of instances have occurred where the conductor of a freight train, after conversation on the trainphone system with the engineman of his train and wayside station, or with other trains in the vicinity, has found the Carryphone to be of great assistance in taking care of unusual conditions. The delays resulting from unforeseen adverse circumstances or unusual conditions are minimized by its use in planning and carrying out work involved.

John Samuel Pyeatt Dies

JOHN SAMUEL PYEATT, president of the corporate organization of the Denver & Rio Grande Western, and chairman of the board of the Missouri Pacific (corp.) from 1938 to 1945, died on October 20, at New Orleans, La., as reported in the *Railway Age* of October 26.

Mr. Pyeatt's long career and service on many railroads throughout the country gave him a wide acquaintanceship in the industry, and one which he did not permit to decline as the years passed. It was his custom on his numerous trips across the country to visit with his many friends, regardless of their rank, and it was not unusual for a local agent, with whom he had once worked in a minor capacity, to be the recipient of one of Mr. Pyeatt's visits.

John Samuel Pyeatt

Began Service in 1894

He was born on September 29, 1874, at Prairie Grove, Ark., and, after a public school education, entered railway service in October, 1894, as a clerk in the local office of the Cleveland, Cincinnati, Chicago & St. Louis (part of the New York Central System), at Cairo, Ill., and served in various station and yard clerical positions on that line for three years. His remarkable ability to learn quickly the fundamentals of railroading led to his being appointed chief clerk to the general superintendent of the St.Louis, Iron Mountain & Southern (then that part of the Missouri Pacific System extending from St. Louis, Mo., to Texarkana, Ark., and now a part of the Missouri Pacific itself), with headquarters at St. Louis, in 1897. In 1901 he was named chief clerk to the general manager of both the Missouri Pacific and the Iron Mountain, and served in this capacity for three years.

Mr. Pyeatt's first position as a railway officer was attained in October, 1904, when, at the age of 30, he was appointed superintendent of the Buffalo division of the Pere Marquette, at St. Thomas, Ont. The following year he was transferred to the Detroit district, with headquarters at Detroit, Mich., where he remained until January, 1911, when he was appointed superintendent at Grand Rapids, Mich., with jurisdiction over the Grand Rapids district. In May of that year he left the Pere Marquette to become superintendent of the River and Cape division of the St. Louis & San Francisco (now St. Louis-San Francisco), at Chaffee, Mo.

It was at about this time that Mr. Pyeatt came to the notice of the late B. F. Yoakum, then chairman of the board of the Frisco, and the man who was responsible for the development of the New Orleans, Texas & Mexico, the St. Louis, Brownsville & Mexico and other parts of the Gulf Coast Lines of the Missouri Pacific. (At that time the Gulf Coast Lines were owned and operated by the Frisco.) Recognizing Mr. Pyeatt's talents, Mr. Yoakum selected him to become vice-president and general superintendent of the St. Louis, San Francisco & Texas and the Ft. Worth & Rio Grande (the latter now part of the Gulf, Colorado & Santa Fe), at Fort Worth, Tex., which then comprised the north and central Texas lines of the Frisco. Mr. Pyeatt held this position only from February to June of 1912, when he was elected vice-president and general manager of the Frisco's Gulf Coast Lines, comprising the New Orleans, Texas & Mexico; the Beaumont Sour Lake & Western; the Orange & Northwestern; and the St. Louis, Brownsville & Mexico, with headquarters at Houston, Tex.

Unfortunately the cost of construction and acquisition of the various Gulf Coast Lines and other railways had been too much for the Frisco, and it, together with most of its subsidiaries, including all of the Gulf Coast Lines, were thrown into receivership the following year. Mr. Pyeatt was appointed manager for the receiver of all of these roads, except the N. O. T. & M., which was operated by a separate receiver. Reorganization of all of these lines and their emergence as an independent system was completed in 1916, and in March of that year Mr. Pyeatt was elected their president. During World War I, he served first as federal manager for these and other lines in the Southwest, known as Group 6 of the United States Railroad Administration, and from March, 1919, to March, 1920, as federal manager of the Frisco. With the return of the carriers to their owners in the latter month, he was re-elected president of the roads comprising the Gulf Coast Lines.

From $10 to $100 a Share

In his capacity as president of the Gulf Coast Lines, Mr. Pyeatt developed the system into one of the most profitable in the nation, and directed it during the period of expansion into a well-rounded property. As reorganized the N. O. T. & M. was the parent company of the Gulf Coast Lines, controlling the others through stock ownership. One indication of the financial success of the lines under Mr. Pyeatt's direction is outlined by S. G. Reed, retired freight traffic manager of the Southern Pacific Lines in Texas and Louisiana, in his book "A History of the Texas Railroads," relating how the market price of the stock of the N. O. T. & M. advanced from about $10 a share in 1916 to more than $100 a share in 1925.

In 1922 the New York and St. Louis financial interests in control of the Gulf Coast Lines entered into an agreement to sell these lines to the Frisco, but were blocked by action of the Missouri Pacific before the Interstate Commerce Commission. Two years later, in 1924, the lines were sold to the Missouri Pa-

cific, I. C. C. approval of the transaction being granted within a week of the date of the initial application for authority to acquire control.

Although formal control of the Gulf Coast Lines did not pass to the Missouri Pacific until January 1, 1925, that road had been interested in the property for some time, and the officers of the M. P. were familiar with Mr. Pyeatt's record in strengthening the Gulf Coast Lines. Accordingly, he was selected to head the Denver & Rio Grande Western, which, in December, 1924, emerged from receivership and passed into the control of the Missouri Pacific.

Mr. Pyeatt remained as president of the Rio Grande from December, 1924, until his death, although he relinquished active direction over the operation of the road in 1935, when the continued business depression of the 1930's forced the road to file a petition in bankruptcy. In May, 1938, he was elected also chairman of the board of the Missouri Pacific (corp.), directing that company's actions in bankruptcy proceedings. Mr. Pyeatt continued to serve both companies in these capacities until 1945, when failing health made it necessary that he give up his position with the Missouri Pacific.

COMMUNICATION . . .

Finding Space on a Competitor's Train

CHICAGO

TO THE EDITOR

I have been a little behind in my reading, but, in an endeavor to catch up, I was particularly interested in "Competitor's Comment" on page 160 of the August 3 issue of *Railway Age*, telling how an airline, unable to supply space to a customer, had got space for him on a competing line.

I am happy to report that during recent years, when this office was handling both freight and passenger business on a joint basis, we quite frequently assisted patrons in just such a situation and were more than glad to get accommodations via a competing line in instances where we were unable to take care of the patron. Undoubtedly other railroads have also done this, but, apparently, are "hiding their candle under a bushel" and, perhaps, are not as fortunate in procuring publicity as their air competitors seem to be.

Of course, without a doubt, the railroads could very well afford to "take a leaf from the book" of their air line competitors, with respect to the matter of according the passenger individualized service to the fullest extent that it may be possible.

R. M. MARTIN
Western Freight Traffic Manager, C. of Ga.

NEW BOOKS . . .

Manual of Design for Arc-Welded Steel Structures. 281 pages. 6 in. by 9 in. Bound in fabricoid. Published by The Air Reduction Sales Company, 60 E. 42nd St., New York 17, N. Y. Price $2.00.

This publication fills a long-standing need for a comprehensive source of information that will facilitate the design of welded steel structures and provide a supplementary text for engineering students. The book is intended as a handbook of welded design, comparable to those portions of structural-steel hand books which supply information on the design and details of riveted joints and connections. Compiled by LaMotte Grover, an engineer well known in the field of structural welding, the methods and procedures described are based upon the standards of the American Welding Society, the American Institute of Steel Construction, and the Structural Steel Committee of the Welding Research Council.

A feature of the manual of particular interest is the section devoted to design diagrams for weld groups in connections subjected to eccentric loading. Another feature is a set of beam safe-load tables, compiled to show standardized welded connections for various beam sizes and span lengths. In these tables, the designer will find, in most cases, three different welded connections for each situation, usually an angle seat, a tee seat, or a pair of framing angles.

In addition to the tabular material, the book includes discussions of various subjects pertaining to welding, such as general specifications, types of welds, welding terms, definitions and symbols, electrodes, qualification of welders, and shop painting practices. Also included are comprehensive discussions of cost estimation in welded construction and the inspection of structural welding, together with references to more comprehensive treatises on inspection. Although the manual presumes a knowledge of applied mechanics and strength of materials, considerable elementary information is included, particularly with reference to the design of welded construction.

Proceedings of the American Railway Engineering Association for 1946. 786 pages, illustrated. Published by the Association, 59 East Van Buren street, Chicago. Bound in cloth, $8.00; in half morocco, $9.00.

This volume contains the complete record of the activities of the association for the year ended with the annual convention last March, and includes the reports of 19 committees and the discussions that followed their presentation at the convention, together with a number of monographs on highly technical subjects. The subjects covered in the various reports, which number a total of 86, deal with nearly every phase of railway construction and maintenance, and while many of them reflect war-time conditions, they include the latest information relative to economy in engineering and maintenance practices. Again, in the 1946 Proceedings, substantially all of the reports represent the result of several years intensive study by the respective committees, a factor which assures this volume a ranking place in railway technical literature.

Space will not permit a review or complete listing of the individual committee reports, but the following assignment ref-

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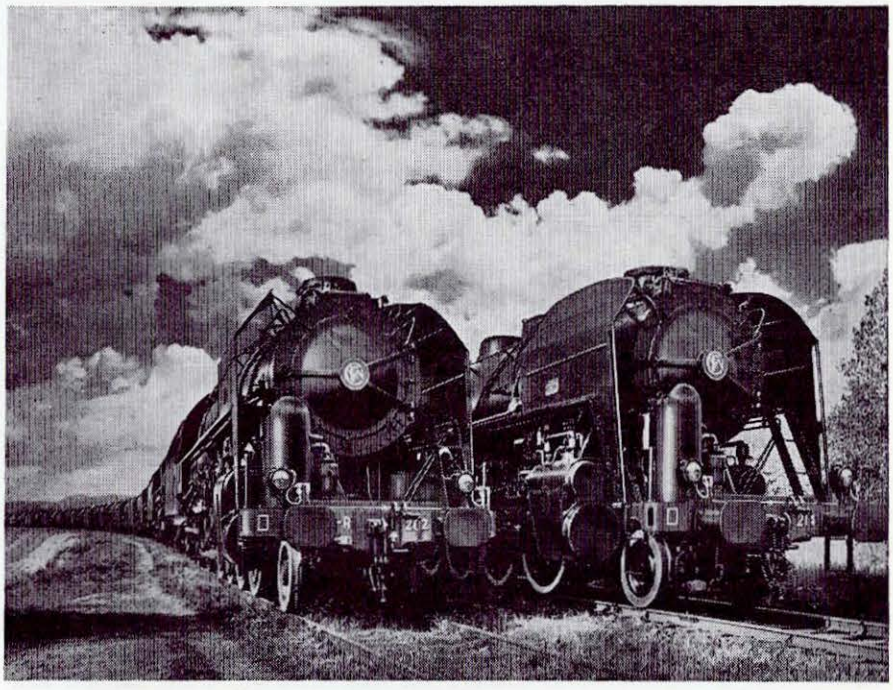


Awaiting Passage to France

Train of 2-8-2 type locomotives built in Canada for France by the Montreal Locomotive Works, subsidiary of American Locomotive Company, awaits removal to ships for transfer to Europe. They are the first consignment of an order for 100 steam locomotives for the French National Railways

erences will indicate the wide range of subjects covered: Appreciation of University Training by Railway Officers; Government Regulations Pertaining to Railway Sanitation; Conserving Labor and Materials in Water Service; Color Dynamics in Increasing Efficiency; Organization, Machinery and Tools for the Repair of Maintenance of Way Work Equipment; Diesel Engines; Roadbed Stabilization; Splitting and Mechanical Wear of Ties; Life of Steel Casting Immersed in Sea Water; Termite Destruction and Prevention; Housing and Transportation of Maintenance Forces; Shelly Spots and Head Checks in Rail; Development in Rail Design; Renewing Creosoted Timber, Ballasted-Deck Trestles; Impact on Railway Bridges; Research on Welded Structures; Waterproofing of Railway Structures; and preliminary reports on Stress Measurements on Various Designs of Solid Manganese Crossing Frogs, and on the Effect of the Form of Tie Plate Seats on Stresses in Rail Base Flanges and Lower Web Fillets.

Reports of special interest to operating officers include: The Length of Sidings for Freight Train Operation; Economics of Railway Location and Operation as Affected by Electrification; Produce Terminals; and Reduction in Maintenance of Way Clerical Work and Reports.

The technical monographs included in the proceedings deal with the Determination of Lateral Outward Forces on Each Rail of a Turnout, by H. E. Durham, track engineer, Engineering division, Association of American Railroads, Chicago; Two Problems in Bridge Design, by L. T. Wyly, associate professor of civil engineering, Northwestern University, Evanston, Ill., and the Effect of the Ratio of Wheel Diameter to Wheel Load on Extent of Rail Damage, by N. J. Alleman, special research associate professor of engineering materials, University of Illinois, Urbana, Ill.

As in past years, the Proceedings also includes the usual statistical reports on such matters or crosstie renewals, rail failures, and service tests of treated wood.

High Speed Freight Car Truck

Continuing its laboratory research and road tests with instrumented test cars, the Symington-Gould Corporation, Rochester, N. Y., has developed freight-car truck designed for safe operation at passenger-train speeds and for maximum protection of lading in high-speed freight transportation. This truck incorporates features to provide for the maximum absorption of external vertical and lateral shocks and to equalize wheel loads.

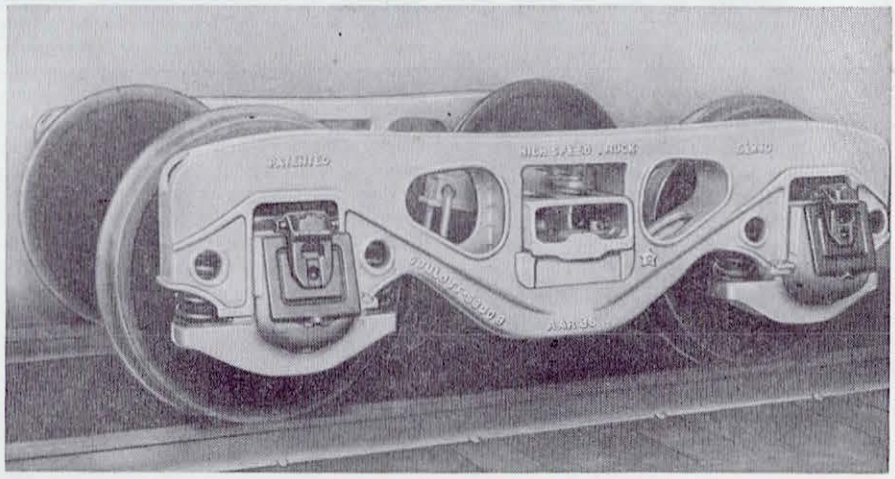
It has separate journal boxes and springs that are carried on brackets on the sides of the boxes which support the pedestal-type side frames. The close spacing of the springs and the placement of the snubbers lessen the tendency of the journal box to rotate.

The legs of the pedestal jaws of the side frames, instead of being continuous flat faces, are hollow with narrow faces at each side wall of the frame casting. The inside vertical surfaces of these side walls are beveled, the opening between them being widest nearest the box face. On these faces are hardened steel liners.

An expanding type snubber is carried against each side of the journal box. It is restrained to move vertically with the box, but is free to move laterally with respect to the box. The spring within the snubber unit operates to expand it against the bevel walls of the pedestal jaw, between which it is confined. The pressure thus induced between these surfaces effects control of vertical movement. The effect of the slope of the bevel sides of the jaw is to create a force component acting between the face of the snubber and a liner on the side of the box. This component is lower than the pressure against the sides of the pedestal jaw. It is sufficient to control the lateral movement and prevent harmonic build-up, but does not delay the restoration of the journal box to its normal position after lateral displacement.

The pedestal springs therefore perform two functions: carrying the vertical load and permitting lateral motion of the boxes. The snubbers also perform two functions by preventing harmonic spring build-up both vertically and laterally.

This absorption of both vertical and lateral forces at the boxes reduces the transmission of these forces to and through the side frames which occurs with the usual integral box frames and spring-supported bolster and increases the fatigue life of the side frames. The cushioning of lateral shocks at the boxes was dictated by the assumption that the great majority of lateral shocks originate at the rail head and that their absorption near the point of origin is logical. The side frames function as equalizers, rocking fore and aft relative to the bolsters either simultaneously or independently without loss of bearing area, thereby maintaining substantially equal deflection of all pedestal springs regardless of track yield or irregularities. The normal alignment between the frames and the bolsters is maintained without slack through two lines of large-pitch gear segments integral with each bolster end intermeshing with mating teeth in the bolster chairs which are interlocked with the side frames. These teeth permit practically unrestrained relative rocking between the bolster and the side frames, and they resist longitudinal shocks without permitting any contact between the bolster ends and the side-frame columns in normal service. The vertical bolster load is not carried on the lines of the gear teeth but on ample rolling bearing areas between each pair of gear segments, these areas being contoured as segments of the respective gear pitch circles.



The Symington-Gould high-speed freight truck absorbs lateral and vertical forces at the boxes

Coupler height is adjusted when necessary by shimming between the bolster chairs and the side frames. Other than this adjustment, there is no relative motion between these two elements.

This design of truck permits the use of either the conventional arrangement of brake-beam suspension with auxiliary brake-beam safety supports, or the beams themselves may be directly supported in guide brackets integral with longitudinal members which are attached to the bottoms of journal boxes. This latter arrangement maintains a constant relationship between the brake beams and the wheels during lateral box movements and under varying load conditions, and eliminates the necessity for auxiliary beam supports.

GENERAL NEWS

R.C.C. to Repay Last of Ex Parte 103 Fund

Will complete distribution on November 15, but roads got no interest

Announcing a November 15 distribution, which will mark the return of 100 per cent of the original fund contributed by carriers participating in the "marshalling and distribution" plan of 1931, E. G. Buckland, president of the Railroad Credit Corporation, has also noted that while the participating roads would thus lose none of the principal amount contributed, they received nothing "for the use of the contributed money for nearly 15 years." Adoption of the "marshalling and distribution" plan, and creation of the Railroad Credit Corporation to administer it, resulted from the Interstate Commerce Commission's October, 1931, decision in the Ex Parte 103 rate-advance case.

The original report in the case authorized certain emergency freight-rate increases upon condition that the revenues derived therefrom be pooled and distributed to needy roads. The railroads responded with the plan embodied in the R. C. C. set-up for making loans to needy roads out of revenues derived from the increases; and the commission, without approving or disapproving the railroad plan, withdrew the pooling requirement, saying at the same time that it was relying on the railroads "to apply the funds to be derived from the authorized increases in rates . . . in accordance with the purposes expressed in our original report."

The Ex Parte 103 increases became effective January 2, 1932, and from that time until May 31, 1933, the Credit Corporation carried on its lending activities. Since that time it has functioned as a collecting and liquidating agency to repay to the railroads the amounts they contributed to the loan pool.

The November 15 distribution, which will bring these repayments to 100 per cent of the original fund, will amount to $360,822.06, or one-half of one per cent of the fund. Of this amount, $359,170.03 will be paid in cash and $1,652.03 will be credited on carrier's indebtedness to the corporation. Then the total amount distributed will have become $73,329,458.30, of which $44,565,022.35 will have been paid in cash and $28,764,435.95 in credits.

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The total of 77,552 women employees as of the middle of July compares with a July, 1945, figure of 117,307. The totals of all employees at the same times were 1,349,588 and 1,451,306, respectively.

As compared with mid-April, 1946, there were declines in the mid-July figures for women employees in practically every employment group. The largest number continues to be included in the professional, clerical and general category, for which the mid-July total was 60,039, as compared to mid-April's 64,663. There were 8,089 women employed in maintenance of equipment and stores as compared to 10,424 in mid-April; 9,009 as compared to 9,895 in transportation work, other than train, engine and yard service, and 260 as compared to 340 in maintenance of way and structures.

At mid-July, 19 women were employed as executives, officials or staff assistants, 31 as switchtenders, and 105 in train and engine service.

Surgeons Ask Medical Meetings for Railroad Employees

Periodic meetings of railroad employees for the purpose of hearing lectures on the care of their bodies was advocated by the American Association of Railway Surgeons at its 57th annual meeting on October 29-31, at the Sherman Hotel, Chicago.

Members of the association, representing 29 railroads participating in the session, presented technical papers on advanced procedure in railroad medicine and surgery. Scientific exhibits, illustrating medical problems and aids to their solution, also featured the meeting.

Principal speaker at the association banquet was I. B. Tigrett, president of the Gulf, Mobile & Ohio, who praised the work of surgeons and pointed to medicine as the "only profession that labors to destroy the reason for its own existence."

Dr. F. M. Summerville, surgeon for the Pennsylvania, New York Central and the Erie, at Oil City, Pa., was elected president of the association for the coming year. Other new officers are: Vice-presidents, Dr. Edward P. Heller, surgeon and examiner for the Chicago, Burlington & Quincy, Kansas Cty, Mo.; Dr. J. E. Harbison, surgeon, Chicago, Rock Island & Pacfic, Oklahoma City, Okla.; Dr. John A. Cahill, surgeon, Chicago, Milwaukee, St. Paul & Pacific, Dubuque, Iowa; treasurer, Dr. T. L. Hansen, chief surgeon, Rock Island, Chicago; secretary, Dr. R. B. Kepner, chief medical officer, Burlington Line. Chicago, who was re-elected to that position.

Coal Strikes Impel C. N. J. to Dieselize

Road refuses to rely longer on fuel so subject to labor troubles

Pointing out that many railroads were forced to curtail operations earlier this year because of fuel shortages caused by a nation-wide strike in the soft coal mines and that another crippling strike in the bituminous coal fields is threatened, William Wyer, chief executive officer of the Central of New Jersey, said on November 6 that "the aim of the Jersey Central Lines management is to give the railroad complete independence from the use of bituminous coal and we will continue to replace bituminous-burning locomotives with oil-burning Diesel-electric locomotives as rapidly as possible."

Speaking at Eddystone, Pa., on the occasion of accepting the formal delivery from Ralph Kelly, president of the Baldwin Locomotive Works, of the road's first Diesel-electric passenger locomotive, Mr. Wyer added: "We are sympathetic with the difficulties of our friends in the bituminous coal industry, but the Jersey Central Lines and its patrons cannot and will not be placed at the mercy of the whims of any man who decides to call a strike in the soft coal mines when it suits his fancy. This condition has prevailed too frequently in the past, but it is going to end as far as the Jersey Central and its operations are concerned."

The new 2,000-hp. locomotive, especially designed for suburban service, will be named "Frank L. Perkins" after a Jersey Central Lines employee who was killed in the invasion of Normandy.

Delivery of the locomotive at Jersey City, N. J., is expected about November 15. Mr. Wyer said that the use of this new type of locomotive would mark the first time any railroad had used such a large type Diesel-electric engine in suburban passenger service. Delivery of this locomotive, he added, also will mark another first for the Jersey Central in the employment of Diesel-electric motive power. It was in 1925 that the Jersey Central became the first railroad to use Diesel-electric motive power by placing in service a switching locomotive of that type at its Bronx, N. Y., terminal. The switching locomotive is still in use at that terminal and since 1925 the road has added 30 more Diesel-electric switchers to its roster.

Mr. Wyer also disclosed that two other

(*Continued on page 775*)

and it also ends the relief involved in the cases eliminated.

The reopening of the fourth-section cases was part of the commission's response to the request of the United States Maritime Commission for an investigation of all railroad rates competitive with those of domestic water carriers. Railroad returns to the show-cause order were due October 9, and the commission has now set back from October 23 to November 23 the deadline date for the filing of replies to the railroad returns.

September Truck Traffic

Motor carriers reporting to the American Trucking Associations, Inc., transported in September 1,848,420 tons of freight, a decrease of 11.1 per cent below the 2,080,089 tons transported in August, but an increase of 11.2 per cent above the September, 1945, total of 1,662,185 tons. The A. T. A. attributed the September decrease to the trucking strikes, particularly those in the northeastern area of the United States.

The A. T. A. index figure, based on the 1938-40 average monthly tonnage of the reporting carriers, was 170 for September, as compared with the 1946 peak of 204 attained in August.

The foregoing figures, according to the A. T. A. statement, are based on comparable returns from 207 carriers in 37 states. Carriers in the Eastern district reported a tonnage decrease of 14.1 per cent below August, but an increase of 11.8 per cent above September, 1945. In the Southern region, a decrease of 10.7 per cent below August and an increase of 2.3 per cent above September, 1945, was reported, while in the Western district, there was a decrease of 4.8 per cent and an increase of 12.8 per cent, respectively.

Communications Officers to Meet in Detroit November 19-21

A discussion of the advancement in communication techniques and their application to railroad operations will feature the 23rd annual meeting of the Communications Section of the Association of American Railroads to be held at the Hotel Statler, Detroit, Mich., on November 19-21. Approximately 500 communications officers of American and Canadian railroads are expected to attend.

Those scheduled to address the gathering include Brigadier General Paul F. Yount, assistant chief of transportation of the United States Army; Carl L. Jellinghaus, vice-president of the New York Central, and J. H. Wofford, chief of the Applications and Hearings Section of the Federal Communications Commission.

According to the A.A.R., other highlights of the meeting will include the presentation of reports by 14 of the section's committees, and the reading of special papers by H. A. Affel, director of transmission development of the Bell Telephone Laboratories; F. B. Bramhall, transmission research engineer of the Western Union Telegraph Company; W. L. Webb, director of engineering and research of the Radio Division of the Bendix Aviation Corporation; W. D. Hailes, electrical engineer of the General Railway Signal Company; Sidney Sparks, vice-president and traffic manager of R.C.A. Communications; G. W. Baughman, chief engineer of the Union Switch & Signal Company, and Dr. C. N. Kimball, of Railway Radio-telephone and Signals.

A. S. Hunt, chairman of the section, and chief engineer of communications and signals of the Baltimore & Ohio, will preside.

Freight Car Loadings

Loadings of revenue freight for the week ended November 2 totaled 922,312 cars, the Association of American Railroads announced on November 7. This was a decrease of 19,945 cars, or 2-1 per cent, under the preceding week, an increase of 70,350 cars, or 8.3 per cent, above the corresponding week last year, and an increase of 29,243 cars, or 3.3 per cent, above the comparable 1944 week.

Loadings of revenue freight for the week ended October 26 totaled 942,257 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, October 26

District	1946	1945	1944
Eastern	182,582	156,435	168,515
Allegheny	192,934	174,606	194,505
Pocahontas	63,864	55,535	57,075
Southern	137,376	125,071	126,228
Northwestern	147,548	134,177	138,902
Central Western	152,578	145,258	151,914
Southwestern	65,375	63,697	79,346
Total Western Districts	365,501	343,132	370,162
Total All Roads	942,257	854,779	916,485
Commodities:			
Grain and grain products	52,409	57,484	55,721
Livestock	30,793	28,005	27,479
Coal	189,782	182,805	176,808
Coke	14,235	8,613	14,150
Forest products	47,823	34,642	45,102
Ore	62,725	58,611	67,490
Merchandise l.c.l.	131,562	116,524	110,177
Miscellaneous	412,928	368,095	415,558
October 26	942,257	854,779	916,485
October 19	931,766	773,807	906,005
October 12	899,443	754,559	898,720
October 5	906,848	768,040	877,035
September 28	916,483	832,309	912,627
Cumulative total, 43 weeks	34,098,911	35,165,284	36,344,310

In Canada.—Car loadings for the week ended October 26 totaled 86,189 cars as compared with 76,344 cars for the previous week and 78,755 cars for the corresponding week last year according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 26, 1946	86,189	37,839
October 27, 1945	78,755	31,617
Cumulative totals for Canada:		
October 26, 1946	3,002,137	1,473,719
October 27, 1945	2,992,494	1,514,376

First Locomotive in New Monon Fleet Delivered

With the dedication before a crowd of approximately 500 townspeople, city officials, and railway employees of Lafayette, Ind., the Chicago, Indianapolis & Lopisville, on November 5, accepted delivery of a new 1,000-hp. Diesel-electric switching locomotive from Fairbanks, Morse & Co. Immediately following the ceremonies, at which Monon and Fairbanks, Morse officers and the mayors of Lafayette and W. Lafayette spoke briefly, the locomotive was put to work in the road's Lafayette yards.

At a luncheon which followed the dedication services, John W. Barriger, president of the road, asserted his intention of building the fastest railroad in the world by modernizing the Monon's Hammond, Ind., to Indianapolis line. When the program is completed, he said, train speeds of 100 m.p.h. will be commonplace on the line and a passenger schedule of 2 hr. 30 min. for the 183 miles between Chicago and Indianapolis will be made effective.

Mr. Barriger compared railroad improvements to compound interest, stating that each improvement completed makes the next easier to accomplish. He declared that, except in areas where traffic potentialities are severely restricted, a railroad is prosperous because of its high standards and modern equipment, holding that a favorable traffic position goes with such standards and equipment.

Col. Frank Cheshire, newly appointed general manager of the Monon, told the audience of railway and labor organization officers and city officials that, although this was not the first Diesel switcher on the Monon, it was the first of the large fleet of Diesel switching and road locomotives ordered by the road's new management to be delivered. Col. Cheshire termed the delivery of the new locomotive "the first material evidence of the beginning of the Monon's modernization program."

Long Island Deficits to Bar New Equipment Purchases

The Long Island has on order 10 double-deck passenger cars, to cost approximately $1,250,000, for delivery shortly after January 1, but lack of funds prevents the road from ordering any additional cars, J. C. White, vice-president, disclosed on October 31 at a Public Service Commission hearing in the Woolworth building, New York. For the year 1946, Mr. White told Commissioner George A. Arkwright, who is investigating the problem of standees during rush hours, the railroad estimates a deficit of $2,166,896, and for 1947, a deficit of $4,968,000.

Mr. White pointed out that the Long Island has not been allowed to increase its commutation fares since 1918, although other railroads serving New York have been granted substantial commutation fare increases since that time. The Long Island, he added, derives nearly two-thirds of its income from passenger service, a large proportion of which consists of commutation business.

E. L. Hofmann, superintendent of the Long Island, had testified earlier that delivery of the new double-deck cars, each of which will seat 134 passengers, and a reduction in the number of cars in the shops for repairs, would materially reduce the number of standing passengers.

"Generally speaking," Mr. Hofmann testified, "we do not have standees on our trains east of Jamaica. Most of the standees ride on trains from Jamaica to New York or Brooklyn. There are express trains with limited stops on the way to New York and Brooklyn, and some of these trains carry a standing load. On

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(*Continued on page 775*)

9 Months Net Income Totaled $96,500,000

Net railway operating income for the same period was $365,611,041

Class I railroads in the first nine months of this year had an estimated net income, after interest and rentals, of $96,500,00, as compared with $451,565,025 in the corresponding period of 1945, according to the Bureau of Railway Economics of the Association of American Railroads. The nine-months' net railway operating income, before interest and rentals, was $365,611,041, compared with $778,146,722 in the same period last year.

September's estimated results showed a net income of $38,500,000, compared with $8,848,870 in September, 1945, while the net railway operating income for that month was $67,362,490, compared with September, 1945's $43,133,855. In the 12 months ended with September, the rate of return averaged 1.59 per cent, compared with 3.73 per cent for the 12 months ended with September 30, 1945.

"Taxes and net earnings for the month of September and for the first 9 months of 1946 are after taking credit in the accounts for carry-back tax credits," the A.A.R. statement pointed out. It said that although the amount of such credits was not available at the time the financial statement for September was released, such credits totaled $6,640,000 for the month of August and $60,326,000 for the first 8 months of 1946. It further noted that the net railway operating income for September and the first nine months of 1946 would have been reduced had the carry-back credits not been made.

Gross in the nine months totaled $5,621,973,863, compared with $6,926,755,435 in the same period of 1945, a decrease of 18.8 per cent. Operating expenses amounted to $4,713,217,845, compared with $4,911,444,741, a decrease of 4 per cent.

Fifty-four Class I roads failed to earn interest and rentals in the nine months, of which 24 were in the Eastern district, 11 in the Southern region and 19 in the Western District.

Class I roads in the Eastern district in the nine months had an estimated deficit of $6,600,000, compared with a net income of $190,184,097 in the same period of 1945. For September, their estimated net income was $12,400,000, compared with $13,554,374 in September, 1945. The nine months' net railway operating income in the Eastern district was $112,596,286, compared with $337,878,063 in the same period of 1945; for September, it was $25,859,335, compared with $26,805,769 in September, 1945.

Gross in the Eastern district in the nine months totaled $2,500,250,462, a decrease of 14.5 per cent compared with the same period of 1945, while operating expenses totaled $2,160,679,841, or a decrease of 1 per cent.

Class I roads in the Southern region in the nine months had an estimated net income of $8,500,000, compared with $61,306,413 in the same period of 1945. For September, they had an estimated net income of $2,700,000, compared with $1,782,730 in September, 1945. Those same roads in the nine months had a net railway operating income of $52,461,218, compared with $109,093,418 in the same period of 1945. Their September railway operating income amounted to $6,997,741, compared with $7,403,184 in September, 1945.

Gross in the Southern region in the nine months totaled $784,958,105, a decrease of 18.1 per cent compared with the same period of 1945, while operating expenses totaled $657,200,147, an increase of 1.3 per cent.

Class I roads in the Western district in the nine months had an estimated net income of $94,600,000, compared with $200,074,515 in the same period of 1945. For September, they had an estimated net income of $23,400,000, compared with a deficit of $6,488,234 in September, 1945. Those same roads in the nine months had a net railway operating income of $200,553,537, compared with $331,175,241 in the same period of 1945. Their net railway operating income in September amounted to $34,505,414, compared with $8,924,902 in September, 1945.

Gross in the Western district in the nine months totaled $2,336,765,296, a decrease of 23.2 per cent compared with the same period of 1945, while operating expenses totaled $1,895,337,857, a decrease of 8.8 per cent.

R. E. A. Asks I. C. C. to Clear Way for Higher Charges

The Railway Express Agency has filed with the Interstate Commerce Commission a petition asking modification of outstanding fourth-section-relief orders to the extent necessary to permit the establishment by R. E. A. of the rate increases authorized by the commission in its Ex Parte No. 163 report on October 28. As noted in the *Railway Age* of November 2, page 738, that report authorizes R. E. A. to establish for a period of one year temporary rate increases calculated to produce about $58,900,000 in additional annual revenue.

CLASS I RAILROADS—UNITED STATES

Month of September

	1946	1945
Total operating revenues	$ 660,401,991	$ 678,878,856
Total operating expenses	529,798,499	620,967,537
Operating ratio—per cent	80.22	91.47
Taxes	49,530,415	1,784,175
Net railway operating income (Earnings before charges)	67,362,490	43,133,855
Net income, after charges (estimated)	38,500,000	8,848,870

Nine Months Ended September 30, 1946

Total operating revenues	$5,621,973,863	$6,926,755,435
Total operating expenses	4,713,217,845	4,911,444,741
Operating ratio—per cent	83.84	70.91
Taxes	430,171,688	1,101,012,822
Net railway operating income (Earnings before charges)	365,611,041	778,146,722
Net income, after charges (estimated)	96,500,000	451,565,025

Pensions for Higher-Salaried Employees

N. Y. Central introduces contributory plan—Reduces retirement age

The New York Central on November 1 introduced a supplementary pension plan, whereby officers and employees who so elect may participate in a contributory pension plan which will pay benefits based on earnings in excess of the $300 per month which already entitle the employee to pensions up to $120 per month under the Railroad Retirement Act.

Every full-time salaried officer or employee receiving regular salary in excess of $300 a month is eligible for membership in the new pension fund. A deduction of 3½ per cent will, under the plan, be made from all earnings in excess of $300 a month by employees who are members of the fund; in 1949 this deduction will rise to 3¾ per cent. The company's contributions to the fund will be as large as necessary to cover all administrative expenses and to meet all demands from the fund in excess of those covered by employee contributions—the company's "normal" annual contribution, to be determined by an actuary on estimates of the company's current assumption of liability under the plan.

Monthly payments to pensioners under the plan will equal the sum of the following: (1) 1 per cent of average monthly pay in excess of $300 over the 10 years preceding retirement multiplied by years of service; (2) 0.35 per cent of monthly pay in excess of $300 for each year 1946, 1947, 1948 when pensioner pays into the fund; (3) 0.375 per cent of monthly pay in excess of $300 for each year after 1948 that pensioner makes payment into the fund. That part of the total pension which is computed at the rate of 1 per cent of the average salary is deemed to be attributable to the railroad's payment to the fund, and is not to exceed a maximum of $1,963.33 per month.

An option is given to participants in the plan whereby, in consideration for a reduction in the pension, provision may be made to continue the payment during the lifetime of a survivor.

The compulsory retirement age of all salaried employees eligible under the new plan is to be reduced from the present 70 years to 65 years by, 6 months' steps each year. That is, the compulsory retirement age will be 69.5 in 1947, 69 in 1948, 68.5 in 1949, and so on until 65 is attained. Total incapacity prior to age 65 will entitle the pensioner to full benefits under the plan if he has had 30 years' service and the road's pension board approves.

A participant in the plan who leaves the company's service will be entitled to a refund of his personal contributions to the fund, with interest at two thirds the "regular" rate, as fixed by the road's pension board (the initial rate being 2½ per cent, compounded annually).

There are certain "ceilings" set on payments to the company's 25 highest-paid employees in the event that the program

should be discontinued; and provision is made that benefits may be reduced if maximum federal "social security" payments to employees are increased, requiring larger payroll taxes to be paid by the railroad.

Train Telephone System Nearly Complete

Installation of the first large scale, permanent system of train-to-train, locomotive-to-cabin car, and train-to-tower continuous telephone communication is nearing completion on the four-track main line of the Pennsylvania Railroad between Harrisburg, Pa., and Pittsburgh, it was announced today.

Including an earlier installation on an important branch in New Jersey, the Pennsylvania now has the train telephone in 150 passenger locomotives, 131 freight locomotives, 100 cabin cars, and 16 wayside control towers, making a total of 397 units. Three hundred ninteen miles of line, including 1,056 miles of main tracks, are covered. All new locomotives on order for service on the main lines are to be equipped.

Railroad officials pointed out that, although several wayside stations and some locomotives and cabin cars remain to be equipped, the train telephone system is now in operation, on a 24-hour daily experimental basis, for the entire distance between Harrisburg and Pittsburgh. Begun more than two years ago, the installation project has been delayed by severe material shortages. Development of the system has been in collaboration with the Union Switch & Signal Company. The total cost to the railroad will be more than $1,000,000.

B. R. E. Explains September Earnings Report

Comparisons of railroad net income in the month of September and subsequent months of 1946, with corresponding months of 1945, will be affected by the application of two provisions of the United States income tax laws, the Bureau of Railway Economics of the Association of American Railroads explained in a November 5 statement.

"Net income for the year 1946," the statement said, "will, in all cases, be increased by reason of carryback tax credits, while net income for the last four months of 1945 was decreased in all cases by additional charges to operating expenses on account of accelerated amortization of expenditures made by the railroads on defense and war projects. Both of these are temporary and nonrecurrent items. Such credits on account of excess profits taxes heretofore paid will come to an end at the close of the calendar year 1946, while the amortization of expenditures for war facilities ended, under the terms of a Presidential executive order, with the close of the year 1945.

"In September, 1945, amortization charges to operating expenses were approximately $100 million more than the monthly average of such charges during the first 8 months of that year. Such an increase in charges to operating expenses resulted, after allowance for the off-setting reduction in income taxes, in a reduction in net income of approximately $40 million for the month of September, 1945. But for this temporary and nonrecurrent item in the accounts for September, 1945, net income for that month would have approximately $48 million, rather than the recorded $8,848,870.

"On the contrary, the reported net income of $38,500,000 for September, 1946, was increased by reason of carryback tax credits taken into account in that month. The amount of such credits for the month of September are not available at this time, but for the month of August was $6,640,000 and for the first 8 months of 1946 amounted to $60,326,000."

Twin Diesels Average 1,037 Miles Daily For 10 Years

Averaging 1,037 miles daily for the past 10 years, the two streamlined Diesel-powered Denver Zephyrs of the Chicago, Burlington & Quincy completed a decade of service on November 8, with a total of 7,443,649 service miles. The trains went into service between Chicago and Denver in 1936, and since that date have made more than 95 per cent of their assigned trips, the road's management stated.

Battelle Institute to Aid in "Shelly" Rail Research

"Shelly" rails, one of the more recent defective types of rails developing under heavy traffic, and which are requiring many premature rail renewals on the railways, are being studied in a research project undertaken recently in the laboratories of the Battelle Memorial Institute, Columbus, Ohio. The object of the research, which is being sponsored jointly by the Association of American Railroads and the American Iron & Steel Institute, is to determine the causes of this type of rail failure and the corrective measures which can be taken. The A. A. R., in conjunction with the A. I. S. I., continues its joint investigation of this matter at the University of Illinois, where, however, the investigation pertains primarily to the resistance to shelling of higher-strength alloy or heat-treated steels.

Loss and Damage Payments Increased in 1945

Freight loss and damage payments for 1945 totaled $78,791,370, an increase of 31.9 per cent over the 1944 total of $59,756,336, according to the 1946 annual report of the Committee on Prevention of Loss and Damage of the Freight Claim division of the Association of American Railroads. Loss and damage payments on express traffic, as reported to the committee by the Railway Express Agency, added an additional $14,259,648 to the total cost of claims borne by United States railways in 1945. The figure reported by the express agency is 47.55 per cent above the corresponding figure for 1944.

The report shows that loss and damage to freight on Class I railroads amounted to 1.16 per cent of freight revenue, the highest percentage since 1922, when the figure was 1.20 per cent. On a per car basis, loss and damage amounted to $1.87 per car, the greatest since 1926, the first year such figures were compiled. By contrast, loss and damage on Canadian roads in 1945 amounted to only 0.476 per cent of freight revenues somewhat higher than the ratio during the 1930's, but no greater than in 1944, and substantially less than for any year prior to 1931. Per 1,000 revenue ton-miles, loss and damage payments by U. S. railways in 1945 were 11.16 cents, compared with 7.78 cents in 1944.

New Eversharp Traffic Manager

Carl H. Dankers, formerly assistant general traffic manager of Fairbanks, Morse & Co., with which firm he was associated for 27 years, has been appointed general traffic manager of Eversharp, Inc. Mr. Dankers will be in charge of traffic at five Eversharp plants manufacturing writing and shaving instruments in New York, Chicago, Denver, Colo., and Toronto, Canada.

Transportation Fraternity Elects Officers

National officers of Delta Nu Alpha, transportation fraternity, elected at the annual meeting of the society held in Wilmington, Del., on October 13 were: president, T. V. Volk, duPont Company, Wilmington, Del; first vice-president, E. C. Morgan, Branch Motor Express, New York; second vice-president, E. H. Breisacher, Northern Pacific, Philadelphia, Pa.; secretary and treasurer, J. E. Howard, Pennsylvania, Wilmington; recorder of records, C. F. Miller, Baltimore & Ohio, Wilmington; counsellor, Dr. G. Lloyd Wilson, professor of transportation and public utilities, University of Pennsylvania, Philadelphia, Pa.

Further Delay for Accounts Covering Perishable Traffic

Division 1 of the Interstate Commerce Commission has further postponed for another year, from Jauary 1, 1947, until January 1, 1948, the effective date of its order prescribing operating revenue accounts 108½, Protective Service Revenue—Perishable Freight, and 117, Protective Service—Perishable Freight. The postponement came in October 16 orders modifying the commission's order of July 13, 1937.

On the same day Division 1 entered another order postponing also from January 1, 1947, until January 1, 1948, the effective date of its May 7 order prescribing a uniform system of accounts for persons furnishing railroads or express companies with cars or protective (temperature-control) services for perishable freight.

Cases Eliminated from Ship-Competitive Rate Probe

Acting upon advices from the railroads that they would not object, the Interstate Commerce Commission has eliminated some 20 fourth-section proceedings from its June 19 order which required the railroads to show cause why the commission should not vacate outstanding orders in approximately 60 cases wherein relief had been granted from the long-and-short-haul clause in connection with the maintenance of water-competitive rates. The order eliminating the 20 proceedings was dated October 24,

and it also ends the relief involved in the cases eliminated.

The reopening of the fourth-section cases was part of the commission's response to the request of the United States Maritime Commission for an investigation of all railroad rates competitive with those of domestic water carriers. Railroad returns to the show-cause order were due October 9, and the commission has now set back from October 23 to November 23 the deadline date for the filing of replies to the railroad returns.

September Truck Traffic

Motor carriers reporting to the American Trucking Associations, Inc., transported in September 1,848,420 tons of freight, a decrease of 11.1 per cent below the 2,080,089 tons transported in August, but an increase of 11.2 per cent above the September, 1945, total of 1,662,185 tons. The A. T. A. attributed the September decrease to the trucking strikes, particularly those in the northeastern area of the United States.

The A. T. A. index figure, based on the 1938-40 average monthly tonnage of the reporting carriers, was 170 for September, as compared with the 1946 peak of 204 attained in August.

The foregoing figures, according to the A. T. A. statement, are based on comparable returns from 207 carriers in 37 states. Carriers in the Eastern district reported a tonnage decrease of 14.1 per cent below August, but an increase of 11.8 per cent above September, 1945. In the Southern region, a decrease of 10.7 per cent below August and an increase of 2.3 per cent above September, 1945, was reported, while in the Western district, there was a decrease of 4.8 per cent and an increase of 12.8 per cent, respectively.

Communications Officers to Meet in Detroit November 19-21

A discussion of the advancement in communication techniques and their application to railroad operations will feature the 23rd annual meeting of the Communications Section of the Association of American Railroads to be held at the Hotel Statler, Detroit, Mich., on November 19-21. Approximately 500 communications officers of American and Canadian railroads are expected to attend.

Those scheduled to address the gathering include Brigadier General Paul F. Yount, assistant chief of transportation of the United States Army; Carl L. Jellinghaus, vice-president of the New York Central, and J. H. Wofford, chief of the Applications and Hearings Section of the Federal Communications Commission.

According to the A.A.R., other highlights of the meeting will include the presentation of reports by 14 of the section's committees, and the reading of special papers by H. A. Affel, director of transmission development of the Bell Telephone Laboratories; F. B. Bramhall, transmission research engineer of the Western Union Telegraph Company; W. L. Webb, director of engineering and research of the Radio Division of the Bendix Aviation Corporation; W. D. Hailes, electrical engineer of the General Railway Signal Company; Sidney Sparks, vice-president and traffic manager of R.C.A. Communications; G. W. Baughman, chief engineer of the Union Switch & Signal Company, and Dr. C. N. Kimball, of Railway Radio-telephone and Signals.

A. S. Hunt, chairman of the section, and chief engineer of communications and signals of the Baltimore & Ohio, will preside.

Freight Car Loadings

Loadings of revenue freight for the week ended November 2 totaled 922,312 cars, the Association of American Railroads announced on November 7. This was a decrease of 19,945 cars, or 2-1 per cent, under the preceding week, an increase of 70,350 cars, or 8.3 per cent, above the corresponding week last year, and an increase of 29,243 cars, or 3.3 per cent, above the comparable 1944 week.

Loadings of revenue freight for the week ended October 26 totaled 942,257 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, October 26

District	1946	1945	1944
Eastern	182,582	156,435	168,515
Allegheny	192,934	174,606	194,505
Pocahontas	63,864	55,535	57,075
Southern	137,376	125,071	126,228
Northwestern	147,548	134,177	138,902
Central Western	152,578	145,258	151,914
Southwestern	65,375	63,697	79,346
Total Western Districts	365,501	343,132	370,162
Total All Roads	942,257	854,779	916,485
Commodities:			
Grain and grain products	52,409	57,484	55,721
Livestock	30,793	28,005	27,479
Coal	189,782	182,805	176,808
Coke	14,235	8,613	14,150
Forest products	47,823	34,642	45,102
Ore	62,725	58,611	67,490
Merchandise l.c.l.	131,562	116,524	110,177
Miscellaneous	412,928	368,095	415,558
October 26	942,257	854,779	916,485
October 19	931,766	773,807	906,005
October 12	899,443	754,559	898,720
October 5	906,848	768,040	877,035
September 28	916,483	832,309	912,627
Cumulative total, 43 weeks	34,098,911	35,165,284	36,344,310

In Canada.—Car loadings for the week ended October 26 totaled 86,189 cars as compared with 76,344 cars for the previous week and 78,755 cars for the corresponding week last year according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 26, 1946	86,189	37,839
October 27, 1945	78,755	31,617
Cumulative totals for Canada:		
October 26, 1946	3,002,137	1,473,719
October 27, 1945	2,992,494	1,514,376

First Locomotive in New Monon Fleet Delivered

With the dedication before a crowd of approximately 500 townspeople, city officials, and railway employees of Lafayette, Ind., the Chicago, Indianapolis & Lopisville, on November 5, accepted delivery of a new 1,000-hp. Diesel-electric switching locomotive from Fairbanks, Morse & Co. Immediately following the ceremonies, at which Monon and Fairbanks, Morse officers and the mayors of Lafayette and W. Lafayette spoke briefly, the locomotive was put to work in the road's Lafayette yards.

At a luncheon which followed the dedication services, John W. Barriger, president of the road, asserted his intention of building the fastest railroad in the world by modernizing the Monon's Hammond, Ind., to Indianapolis line. When the program is completed, he said, train speeds of 100 m.p.h. will be commonplace on the line and a passenger schedule of 2 hr. 30 min. for the 183 miles between Chicago and Indianapolis will be made effective.

Mr. Barriger compared railroad improvements to compound interest, stating that each improvement completed makes the next easier to accomplish. He declared that, except in areas where traffic potentialities are severely restricted, a railroad is prosperous because of its high standards and modern equipment, holding that a favorable traffic position goes with such standards and equipment.

Col. Frank Cheshire, newly appointed general manager of the Monon, told the audience of railway and labor organization officers and city officials that, although this was not the first Diesel switcher on the Monon, it was the first of the large fleet of Diesel switching and road locomotives ordered by the road's new management to be delivered. Col. Cheshire termed the delivery of the new locomotive "the first material evidence of the beginning of the Monon's modernization program."

Long Island Deficits to Bar New Equipment Purchases

The Long Island has on order 10 double-deck passenger cars, to cost approximately $1,250,000, for delivery shortly after January 1, but lack of funds prevents the road from ordering any additional cars, J. C. White, vice-president, disclosed on October 31 at a Public Service Commission hearing in the Woolworth building, New York. For the year 1946, Mr. White told Commissioner George A. Arkwright, who is investigating the problem of standees during rush hours, the railroad estimates a deficit of $2,166,896, and for 1947, a deficit of $4,968,000.

Mr. White pointed out that the Long Island has not been allowed to increase its commutation fares since 1918, although other railroads serving New York have been granted substantial commutation fare increases since that time. The Long Island, he added, derives nearly two-thirds of its income from passenger service, a large proportion of which consists of commutation business.

E. L. Hofmann, superintendent of the Long Island, had testified earlier that delivery of the new double-deck cars, each of which will seat 134 passengers, and a reduction in the number of cars in the shops for repairs, would materially reduce the number of standing passengers.

"Generally speaking," Mr. Hofmann testified, "we do not have standees on our trains east of Jamaica. Most of the standees ride on trains from Jamaica to New York or Brooklyn. There are express trains with limited stops on the way to New York and Brooklyn, and some of these trains carry a standing load. On

some trains, the standees stand for only one station. I estimate that the average time a passenger is compelled to stand is approximately 14 minutes."

The railroad's counsel introduced exhibits showing the daily number of standees on trains operating in both directions between Jamaica and New York and Brooklyn, between the hours of 7:00 a. m. to 10:00 a. m. and 4:00 p. m. to 7:00 p. m., had dropped from 22,192 in June, 1946, to 9,305 in October, a reduction of more than 50 per cent. Another railroad exhibit showed the average number of cars in the shops daily had dropped from 69 in March, 1946, to 29 in September.

Yard Radio on the U. P.

The Union Pacific has installed very high frequency radio for two-way communication between two yard offices and several Diesel switching locomotives in its Kansas City, Kan., yards. This installation has resulted in much time being saved in the dispatching of switching locomotives over many miles of yard tracks in this industrial area, and has eliminated the necessity of crews having to call in by telephone for switching instructions. Yardmasters are now able to keep in constant touch with switching crews under their jurisdiction, which are serving numerous industries and making transfer movements. In numerous instances, deliveries or car pick-ups are now made on short notice, thus affording better service to shippers.

The radio equipment is designed for operation on a frequency-modulated channel of 161.85 megacycles, and includes an unattended fixed station, designated KRUP (Kansas Radio Union Pacific), which is comprised of a transmitter and receiver in a case at the base of a 100-ft. floodlight tower at Fairfax yard. The antenna for this station is mounted on top of the tower. The range of this fixed-station equipment is from 12 to 15 miles. Radio operation in both directions from the fixed station is from two remote control points, the first being in the yardmaster's office in the Armstrong yards, four miles from the station. A seven-mile telephone circuit connects the equipment in the yardmaster's office with the fixed station. The second remote control point is located in the yardmaster's office in the Fairfax yards 200 ft. from the fixed station.

While all switching locomotives are not yet equipped, final plans call for the installation of 50-watt, two-way radio units on 16 Diesel locomotives. The mobile units are housed in metal cabinets on the front wall of the cab. A handset for speaking and listening hangs on the rear wall on the firemen's side of the cab. The switching locomotives use the call letters KRUQ, followed by the number of the particular locomotive concerned.

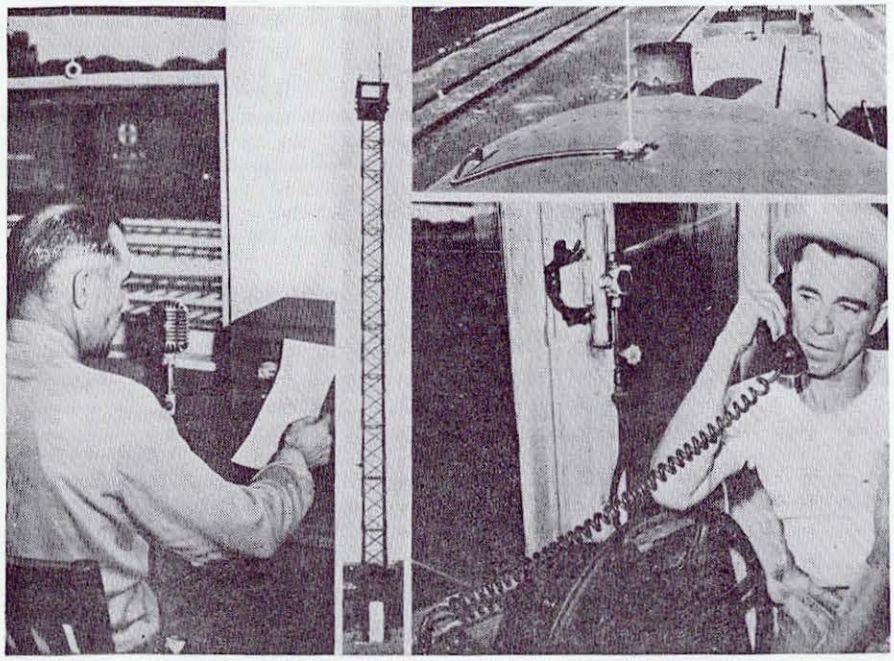
This installation was placed in service at a cost of $25,000, under the jurisdiction of G. R. Van Eaton, superintendent of telegraph. The major items of radio equipment were furnished by the Galvin Manufacturing Corporation, Chicago.

Shippers Request More Cars to Ship Stock Before Winter

Many cattle may be lost on the ranges unless sufficient cars can be obtained for their movement before winter, members of the Northwest Shippers Advisory Board reported at the Board's 78th regular meeting at Fargo, N. D., on October 31.

Speakers pointed to the great stock car demand occasioned by the relaxing of meat ceilings, and urged an increased supply of cars in the Northwest for the shipment of both grain and livestock. The board indicated it would request immediate action from the Interstate Commerce Commission on the car shortage. Also stressed in the discussions was the importance of continued efforts by shippers and carriers to obtain the maximum use of available equipment through greater car efficiency.

Chester C. Thompson, president of the American Waterways Operators, Inc., predicted that the national transportation inquiry being conducted by the House Committee on Interstate and Foreign Commerce would result in a recommendation that all forms of transportation be placed under one regulating body.



Left—View of a yardmaster broadcasting instructions to Diesel switching locomotive. Center—The 100-ft. floodlight tower at Fairfax yard, on top of which is mounted the fixed-station antenna. Right top—Antenna on Diesel locomotive. Right bottom—View showing use of radio facilities on a Diesel locomotive to talk to yardmaster

Pullman Car Used by Roosevelt Sold to Government for $10

Charles G. Ross, press secretary to President Truman, announced recently that the government has purchased for the nominal sum of $10 the Pullman car, the "Ferdinand Magellan," which was reconverted for use by President Roosevelt during the war. The car, outfitted with armor plate and bullet-proof glass windows by the Pullman Standard Car Manufacturing Company on recommendations submitted by the Secret Service, was sold to the government by member roads of the Association of American Railroads, the A. A. R. arranging the transaction.

According to Mr. Ross, the railroads found they had no use for the car at the termination of the war and recommended the transfer of title to the government so that it could be used by the President at any time. Had the car been accepted by the government as a gift, a plan originally proposed by the railroads, it would have been necessary to enact enabling legislation.

Ceiling Prices on Car Material Increased by O.P.A.

Acting upon the recommendation of the Office of Defense Transportation and the Civilian Production Administration that increased prices would insure continued production, the Office of Price Administration on November 6 raised the ceiling price on one-inch car material up to 16 ft. by $12.50 per thousand feet and for lengths of 18 ft. and 20 ft. by $10 per thousand feet.

American Welding Society to Meet at Atlantic City

The twenty-seventh annual meeting of the American Welding Society will be held at the Hotel Ambassador, Atlantic City, N. J., on November 17-22, inclusive. A total of 80 technical papers have been scheduled for presentation at the 24 sessions covering 15 divisions of the welding field.

The papers to be presented at the railroad session on Monday morning, November 18, are: Quantity Production of Railroad Passenger Cars by Resistance Welding, by A. M. Unger, Pullman-Standard Car Manufacturing Co.; Locomotive Boilers—Welded Construction, by James Partington, American Locomotive Company, and Welded Freight Car Construction, by R. L. Rex, Air Reduction Sales Co. The chairman of the session will be A. G. Oehler, associate editor, *Railway*

Age; the vice-chairman, J. W Sheffer, American Car and Foundry Co.

In addition to the papers dealing specifically with car and locomotive construction there are 11 papers on welding research, 13 on resistance welding, 4 on pressure welding, 7 on cutting, 3 on weldability ,3 on electrodes, 4 on production welding, 3 on pressure vessels and storage tanks, 3 on machinery, 3 on shipbuilding, 4 on aircraft, 3 on structural welding, 4 on hard facing and 3 on high alloys scheduled during the week. Nine papers will be presented covering a variety of subjects, such as the arc-welding of cast iron with nickel electrodes, flame hardening and plant maintenance.

The President of the Society, Wendell F. Hess, will preside at the annual dinner on November 21, during which the presentation of medals and prizes will be made. Other features of the meeting will be the Adams Lecture on Monday evening, November 18, to be given by Dr. Hess, Rensselaer Polytechnic Institute; the University Research Conference on Tuesday evening, November 19, and the annual dinner of the Section officers, followed by a session devoted to Section activities, on Wednesday evening, November 20. The President's reception for members and guests of the society will be held Sunday evening, November 17.

Johnson to Present Presidential Certificates of Merit Nov. 12

Ceremonies marking the presentation of the Certificate of Merit, conferred by President Truman on members and former members of the Office of Defense Transportation and Association of American Railroads staffs "for distinguished service to the nation in the field of transportation during the war," will be held in the Washington, D. C., offices of the Interstate Commerce Commission on November 12. The certificates will be presented by Colonel J. Monroe Johnson, director of O. D. T.

Those who will receive the certificates include James H. Aydelott, general manager, Lines East, Chicago, Burlington & Quincy; Charles H. Buford, executive vice-president, Chicago, Milwaukee, St. Paul & Pacific; Arthur H. Gass, director, Railway Transport Department, O. D. T.; Warren C. Kendall, chairman, Car Service Division, A. A. R.; Homer C. King, deputy director, O. D. T.; Henry F. McCarthy, executive assistant to the president, New York, New Haven & Hartford; and Guy A. Richardson, retired president, Chicago Surface Lines.

The certificate also will be awarded posthumously to M. J. Gormley, who prior to his death was executive assistant of the A. A. R. Mr. Gormley's certificate will be accepted by his widow, Mrs. Marie O'Neill Gormley.

Car Service Orders

The Interstate Commerce Commission this week issued Service Order No. 639 which authorizes railroads, at their option, to furnish open-top cars for loading of Christmas trees. The order, effective from November 6 until January 10, 1947, was issued as a result of a commission finding that "there is a shortage of box cars and certain tariffs require that Christmas trees be shipped in box cars only."

Service Order No. 637, effective from November 1 until December 1 unless otherwise modified, grants coal operators at South Atlantic and Gulf ports relief from penalty demurrage charges with respect to cars caught in last month's maritime strike. For the same reason, the commission has issued General Permit No. 5 under Service Order No. 422 to authorize the railroads to disregard, as to cars which arrived at Atlantic, Gulf, and Pacific ports on or after August 24, the order's provisions requiring that cars on hand 10 days be unloaded forthwith where unloading is a railroad responsibility. The permit expires November 10, thus granting relief with respect to cars arriving up to that time; it is otherwise the same as General Permit No. 4 which expired October 31.

By Amendment No. 3 to General Order ODT 18A, Revised, the Office of Defense Transportation, effective November 8, modified the order's carload-minimum provisions insofar as they apply to refrigerator cars, and also provided for special permits authorizing non-observance under specified circumstances. The new provisions with respect to reefer loading stipulate that the order will not require that such cars containing perishables be loaded to the extent of covering the bulkhead or screens. The special-permit part of the amendment permits railroad chief operating officers or division superintendents to issue such permits under the following circumstances: (1) By initial line-haul rail or switching carriers when compliance with the carload freight requirements of the order would result in undue car detention; (2) on complete orders of heavy machinery when no other carload shipment of heavy machinery has been made by the same consignor to the same consignee during the same calendar month; (3) on articles manufactured to the consignee's specifications for use in a specific construction or repair project when no further shipments from the same consignor to such projects are scheduled.

New Construction Procedures Explained by C. P. A.

The Civilian Production Administration, in Interpretation 4 to Veterans Housing Program Order 1, has issued what it terms a "thorough explanation" of the small job allowances for alterations, additions or new constructions of certain utility, transportation and industrial structures. The "interpretation" also gives examples of the effect of the amendment to Supplement 3 of Order VHP-1, issued October 7, restricting the $15,000 exemption for work on specified transportation and other buildings to structures having a floor area of 10,000 ft. or more, and limiting small buildings of these kinds to a $1,000 small job allowance.

According to the C. P. A., Interpretation 4 points out that a small job allowance for transportation and other structures depends upon the floor area which the particular structure has or will have. If the floor area of the particular building being built or altered is or will be 10,000 square ft. or more, the allowance for alterations or additions or new construction is $15,000; if the floor area of the structure involved is and will be less than 10,000 square ft., the allowance is $1,000; and if the cost of the proposed job, figured in accordance with instructions in Supplement 3, exceeds the small job allowance, authorization under VPH-1 must be obtained before starting the job.

The C. P. A. also noted that the floor area of the building directly involved is the only floor area to be considered. The floor area of any other buildings may not be counted, even though they may be situated nearby and used for the same purpose. A building is considered a separate building from the one in which the construction is being done if there are outside or party walls between the two buildings, even though the two are connected by common roofs, continuous foundations, connecting passageways, covered passages, bridges, arcades or the like.

C. P. A. Asks Increased Output of High-Pressure Tank Cars

The Civilian Production Administration, "in order to insure fair distribution of anhydrous ammonia and liquified petroleum gas, which require high-pressure tank cars," has directed the American Car & Foundry Co. and the General American Transportation Corporation to give precedence to the manufacture of 490 cars of this type during December and January, 1947. The scheduling order, issued by the C.P.A. on November 4, requires A.C.F. to expedite the manufacture of 100 high pressure anhydrous ammonia cars and 200 liquified petroleum cars, and General American to supply 118 ammonia and 72 petroleum cars.

According to the C.P.A., the order was necessary to supply cars for the transportation of anhydrous ammonia, needed for the Army fertilizer program in occupied areas, and also to transport the increased production of the liquified petroleum gas industry. The latter is used extensively for cooking purposes in areas not served by local gas systems.

The scheduling order also provides that both manufacturers must give scheduling preference during February, 1947, and March to the production of the liquified petroleum cars "to the limit of their capacity," which the C.P.A. estimated to be approximately 400 units.

Probe of Estimated Weights on Vegetables

With the hope, as Secretary W. P. Bartel put it, that "the principles evolved . . . may serve as a guide in subsequent revisions affecting other vegetables, fruits, and melons," the Interstate Commerce Commission has instituted an investigation into transcontinental rates and estimated weights applicable in connection with carload shipments of beets, carrots, turnips and lettuce. The investigation, docketed as No. 29645, was instituted by an order dated November 4.

Secretary Bartel's accompanying notice also said that the commission was "impelled" to institute it by the failure of the carriers to make "adequate progress" in adjusting the estimated weights to conform to the average actual weights of the pack-

ages. The notice recalled that the commission had admonished the carriers on the matter on *Estimated Weights on Fruits and Vegetables,* 245 I. C. C. 479, and in *Western Growers Protective Assn. v. Aberdeen & R. R. Co.,* 258 I. C. C. 233.

The beet, carrot, turnip, and lettuce traffic involved will be that "shipped with or without tops and with or without ice in the containers, as the case may be, from points of origin in Washington, Oregon, California, and other states, as specified in Agent L. E. Kipp's tariffs I. C. C. Nos. 1508 and 1522 and in Trans-Continental Freight Bureau Territorial Directories, I. C. C. Nos. 1516 and 1517, to points of destination generally east of the Rocky Mountains, as specified under groups A to N, inclusive, in said tariffs and territorial directories."

Coal Strikes Impel C. N. J. to Dieselize

(Continued from page 769)

Diesel-electric passenger locomotives, delivery of which is expected from Baldwin Locomotive before the end of the year, will be named for Jersey Central employees killed in the recent war.

Alleghany Leaves Investigation of Thompsons to I. C. C.

The Alleghany Corporation has notified the Interstate Commerce Commission of its withdrawal from further participation in the Docket No. 29533 proceeding, instituted by the commission after Alleghany had filed a complaint seeking an investigation to determine whether Guy A. Thompson, trustee of the Missouri Pacific, and Frank A. Thompson, trustee of the St. Louis-San Francisco, "have violated or are violating" section 5 of the Interstate Commerce Act which relates to combinations and consolidations of carriers. Following receipt of the notification of withdrawal, the commission set back from November 7 until December 10 the hearings which are to be held at Washington, D. C., before Assistant Director C. E. Bowles of the commission's Bureau of Finance.

The Alleghany complaint was noted in the *Railway Age* of May 18, page 1043. Asserting that the Thompsons are brothers and members of the same St. Louis, Mo. law firm, it went on to allege, among other things, that they "are now managing and controlling" the M. P. and Frisco "in a common interest in violation of section 5(4) of the act." Alleghany's withdrawal, its notice said, was based on the following considerations:

"1. Complainant, by filing its complaint and eliciting from defendants' admissions in their answers of the operative facts upon which the complaint is based, has called to the attention of the Interstate Commerce Commission the situation which complainant contends constitutes a violation of the act, as amended, and thus has accomplished and completed its proper function in the proceedings in accordance with the procedure prescribed and set forth in said act.

"2. It is complainant's position, for reasons more fully stated in its reply to defendants' motion to make complaint more definite . . . that the facts alleged in the complaint and admitted by the defendants in their answers of themselves constitute a violation of said act, and pursuant to the provisions of sections 5(7), 12(1) and 13(1) thereof, the duty to enforce the act and further to prosecute the present proceedings rests entirely upon this commission and not upon complainant.

"3. Complainant's position has been stated in said reply to defendants' motion (which motion of defendants was overruled by the Interstate Commerce Commission) that the facts alleged in the complaint (and since admitted by defendants) render unnecessary any hearing or investigation to establish a violation of the act. But assuming without admitting that any such hearing or investigation are called for, the duty or burden . . . rests entirely upon the Interstate Commerce Commission and not upon the complainant."

The notification further stated that Alleghany does not by its withdrawal "waive, surrender, or relinquish any of its rights under applicable provisions of the act to judicial review of any rule, order, or other determination or disposition of this commission in the premises."

Rio Grande Southern "Recorded" Before Abandonment

Not many railroad historians can have special trains run for their convenience, but when Lucius Beebe and Charles M. Clegg wanted photographs along the Rio Grande Southern in the lonely San Juan region of Colorado for their book, "Mixed Train Daily, A Book of Short Line Railroads," which E. P. Dutton will publish in 1947, executives of the Denver & Rio Grande Western, the parent railroad, obligingly ran an official inspection train for them, putting at their disposal two narrow-gauge business cars dating from the seventies. A. E. Perlman, chief engineer of the Rio Grande, made the trip with the author-photographers, taking four days to cover the 362 miles between Alamosa, Colo., and Ridgeway, by way of Durango, Colo., Dolores, Rico, Lizard Head, Ophir and Telluride. The Rio Grande Southern, one of the last narrow-gauge railroads in the United States, it is expected, will be abandoned at an early date and the rail historians, Beebe and Clegg, were anxious to record its last days for posterity. The line was built by Otto Mears, "Pathfinder of the San Juan," in the nineties and is a souvenir of Colorado's pioneer mining days. Here the two diminutive business cars, each a museum piece with brass beds in their compartments, solid-silver coal-oil lamps, and Baker heating systems, are shown in a mixed consist with a leased locomotive nosing across the long trestle below Lizard Head. The party, accompanied by Denver newspapermen, dined of rare viands flown from New York, and dressed for dinner, reviving the lush tourist days of the nineties when the Southern was part of the grand tour of the United States. At Rico schools were let out to watch the train's passing. It was the first time narrow gauge sleeping cars had passed over the road since 1899.

Representation of Employees

Mechanical department foremen and supervisors employed by the Washington Terminal Company, roadmasters and assistant roadmasters employed by the Chicago & North Western and general roadmasters, roadmasters, general foremen, supervisors of bridges and buildings, general water service foremen, signal supervisors, assistant signal supervisors and general foremen, supervisors of telegraph lines and general steamfitter and plumber foremen employed by the Union Pacific, are now represented by the American Railway Supervisors Association, Inc., as the result of recent elections which have been certified by the National Mediation Board. All of these employees formerly were without representation.

As the result of other elections, the Brotherhood of Railroad Trainmen, by virtue of a 9 to 8 victory over the Order of

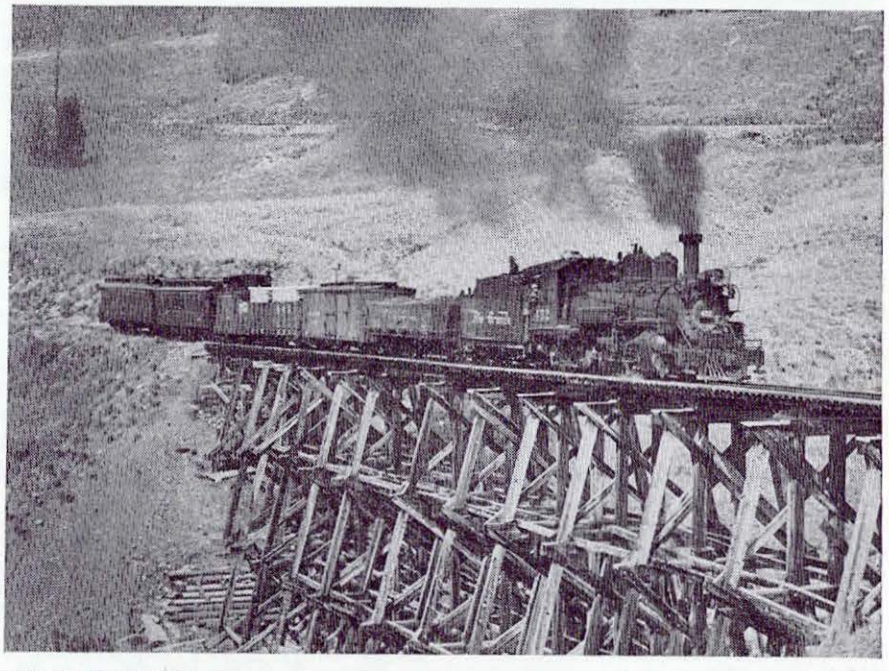


Photo by C. M. Clegg

The "Photographers' Special"

Railway Conductors of America, replaced the latter union as the representative of road brakemen employed by the Utah Railway; the United Railroad Workers of America, C.I.O., succeeded the National Marine Engineers Beneficial Association as the representative of Central of New Jersey marine engineers; the National Council, Railway Patrolmen's Unions, A. F. of L., supplanted the Railroad, Dock and Bridge Watchmen's Unions, Local 210, A. F. of L., as the representative of dock and bridge watchmen employed by the Duluth, Missabe & Iron Range, and the International Association of Railway Employees succeeded the Florida East Coast Association of Colored Locomotive Firemen, Inc., as the representative of locomotive firemen employed by the F. E. C.

The B. of R. T. also defeated the Railroad Yardmasters of America, 74 to 47, thereby retaining its right to represent yardmasters employed by the Reading.

Military Police Relieved of Duty on Passenger Trains

Military police patrols have been relieved of duty on civilian passenger trains, it was announced this week by the War Department. According to Secretary of War R. C. Patterson, the action was taken because of the reduction in the size of the armed forces and "budgetary limitations."

In a letter addressed to J. J. Pelley, president of the Association of American Railroads, Secretary Patterson said that train crews and civilian enforcement officers "must assume greater responsibility" for the maintenance of order among the armed forces on public carriers.

Secretary Patterson added that train conductors may call upon any officer of the armed forces present to assist in maintaining order among members of the armed forces. He suggested that in the event of the necessity for arrest, the conductor should wire for the boarding of the train by the first available M. P.'s in order that the arrest might be made, adding that local police should be called if such M. P.'s are not available.

Replying to Secretary Patterson's letter, Mr. Pelley said in part: "Permit me to take this opportunity, on behalf of the railroads and the Association of American Railroads, to express our grateful appreciation to the War Department for very valuable assistance and cooperation rendered by the Military Police during the war."

At the same time, the Corps of Military Police also reported this week that M. P. patrols on civilian trains reached their peak in July, 1945, when 60,300 trains were policed.

Violation of Unloading Directives Costs 7 Roads $22,500

Secretary W. P. Bartel of the Interstate Commerce Commission announced on November 4 that seven roads were penalized an aggregate of $22,500 on October 29 for failure to unload freight cars on hand for more than 10 days at the Port of New York, a violation of the commission's Service Orders Nos. 368 and 422. Mr. Bartel said he was advised of the settlement in these civil suits by the United States Attorney for the Southern District of New York.

The Pennsylvania and the New York Central each paid $6,000; the Erie and Lehigh Valley, $3,000 apiece, and the Baltimore & Ohio, the Central of New Jersey and the New York, New Haven & Hartford, $1,500 each.

Secretary Bartel also announced that the commission has been advised by the United States Attorney for the District of Arizona that a plea of *nolo contendere* was entered in behalf of the Southern Pacific at Phoenix, Ariz., on October 28, upon an information in six counts which charged violations of the commission's regulations governing the transportation of explosives and other dangerous articles. A fine of $600 was imposed.

The specific offenses charged in the information included (1) improper placing of a carload of freight placarded "Explosives" in a through freight train in the position of seventh car from the locomotive; (2) placing of two cars loaded with gasoline and placarded "Dangerous" in a freight train in the positions of third and fifth cars, respectively; (3) placing of a carload of freight placarded "Explosive" in a through freight train in a position of tenth car from the train's caboose; (4) failure of the carrier to furnish a train crew with a notice of carloads of explosives in a freight train and (5) the handling of a loaded car placarded "Explosives" in yard service coupled next to the locomotive.

Price Control Removed on Rail Power Plants, Bus Bodies

The Office of Price Administartion on November 1 removed price control regulations from stationary power plants used by railroads for handling cinders, fuel, sand or water. At the same time, the O. P. A. also lifted price ceilings from school and passenger bus bodies and equipment parts.

Club Meetings

John W. Barriger, III, president of the Chicago, Indianapolis & Louisville, will address the Chicago Passenger Club at its election dinner on December 2, at the Germania Club, Chicago.

O. D. T. Cancels Order Limiting Lake Grain Shipments

General Order ODT 67, which prohibited Great Lakes grain shipments in American vessels from points outside the United States, was suspended by the Office of Defense Transportation on October 30. The order was issued October 15, O. D. T. explained, because of the "shortage of American vessels to move cargoes of grain, coal and ore between ports on the Great Lakes before the closing of the navigation season."

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago 80, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo. Annual meeting, October 8-10, 1947, Houston, Tex.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDANTS.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September, 1947.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—W. J. Walsh, B. & O. R. R., Baltimore 1, Md.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Virginia Tanner, Baltimore & Ohio Magazine, Room 1202, B. & O. Bldg., Baltimore 1, Md. Annual meeting, November 14-15, 1946, Edgewater Gulf Hotel, Biloxi Miss.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. P. Nye, Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Annual meeting, June 16-20, 1947, Chalfonte-Haddon Hall, Atlantic City, N. J.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Annual meeting, December 2-6, 1946, Hotel Pennsylvania, New York, N. Y. Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN TRANSIT ASSOCIATION.—A. W. Baker, 292 Madison Ave., New York 17, N. Y.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C. Annual meeting, April 22-24, 1947, Multnomah Hotel, Portland, Ore.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O. Annual meeting, October, 1947, Baltimore, Md.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—H. S. Whited, 5th & T Sts., N. E., Washington 2, D. C.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Bldg., Washington 6, D. C.

- Operations and Maintenance Department.—Clark Hungerford, Vice-President, Transportation Bldg., Washington 6, D. C.
  - Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.
    - Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
    - Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.
    - Communications Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y. Annual meeting, November 19-21, 1946, Hotel Statler, Detroit, Mich.
    - Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York 17, N. Y.
    - Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.
    - Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
    - Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
    - Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
  - Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.
    - Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 18-20, 1947, Palmer House, Chicago, Ill.
    - Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.
    - Signal Section.—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y.
  - Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 23-28, 1947, Convention Hall, Atlantic City, N. J.
    - Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill.
  - Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C. Annual meeting, June, 1947, Convention Hall, Atlantic City, N. J.
  - Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago 5, Ill.
  - Motor Transport Division.—George M.

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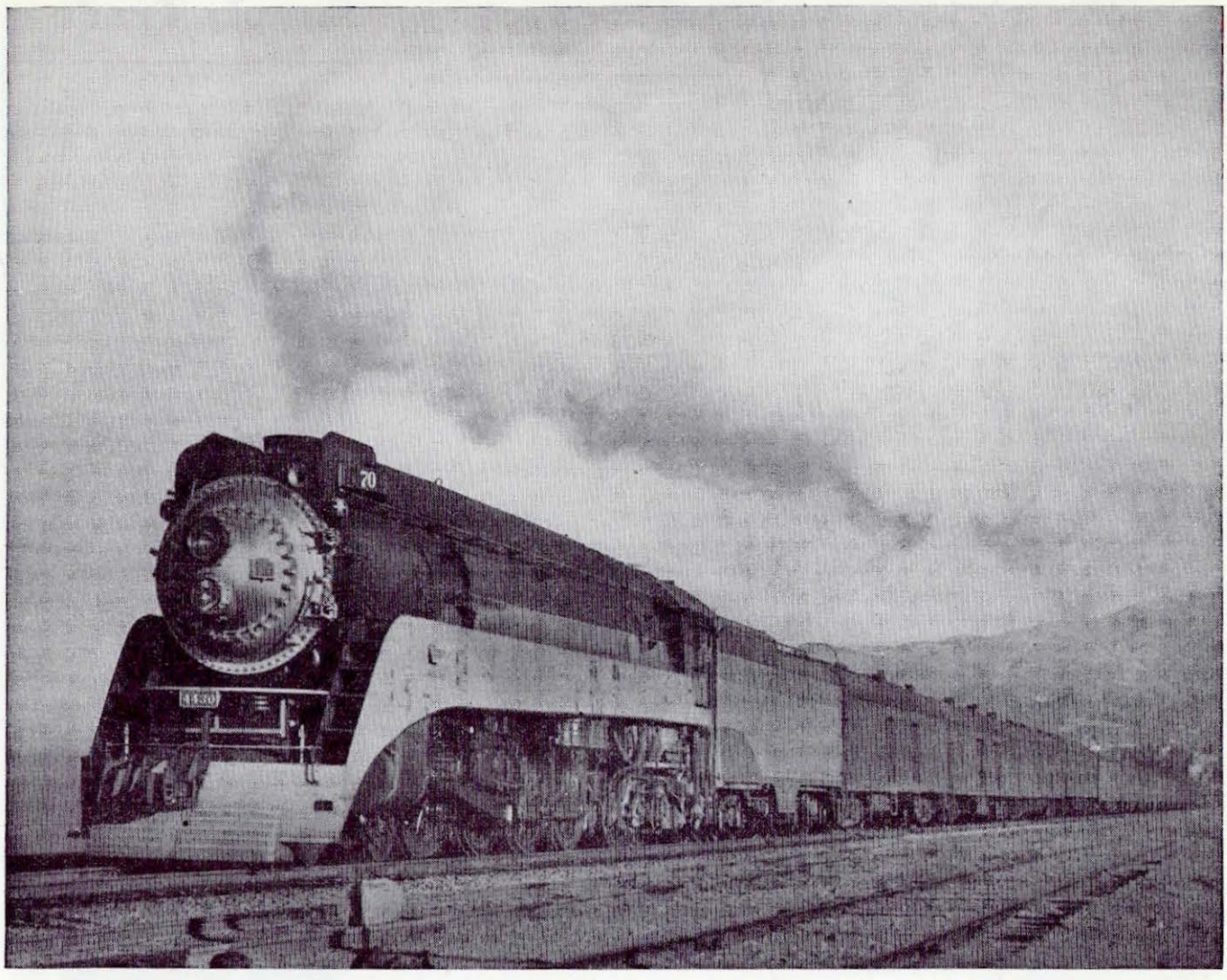


Sustained Speed . . . a first essential

To keep pace with the demands of the traveling public, in the years just ahead, the maintaining of faster train schedules will be a first essential.

To do this will require motive power capable of handling heavy trains at high speeds—and of sustaining such speeds on long runs.

Modern Lima-built steam locomotives not only meet these exacting demands, but operate with maximum efficiency and economy.

LIMA LOCOMOTIVE WORKS LIMA LOCOMOTIVE WORKS INCORPORATED INCORPORATED, LIMA, OHIO

Campbell, Transportation Bldg., Washington 6, D. C.
Car Service Division.—E. W. Coughlin, (Assistant to Chairman), Transportation Bldg., Washington 6, D. C.
Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.
Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Traffic Department.—A. F. Cleveland, Vice-President, Transportation Bldg., Washington 6, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Alton R. R., 340 W. Harrison St., Chicago 7, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Ralph J. Feddor, 2803 N. Campbell Ave., Chicago 18, Ill. Regular meetings, second Monday of each month, except June, July and August.

CENTRAL RAILWAY CLUB OF BUFFALO. — R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

CHICAGO LUNCHEON CLUB OF MILITARY RAILWAY SERVICE VETERANS. — Col. R. O. Jensen, Schiller Park, Ill. Luncheon, second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, Ill.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS. —H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

EASTERN CAR FOREMEN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, North Little Rock, Ark.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany 3, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, November 12-15, 1946, Hotel Biltmore, Los Angeles, Cal.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—F. J. Armstrong, U. S. Radiator Company, Detroit, Mich.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 21-22, 1946, Hotel Pennsylvania, New York, N. Y.

NATIONAL RAILWAY APPLIANCES ASSOCIATION. — C. H. White, Room 1826, 208 S. La Salle St., Chicago 4, Ill. Meeting and exhibit, March 17-20, 1947, The Coliseum, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July and August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB. — D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION. — E. N. Myers, Minnesota Transfer Ry., 1434 Iowa Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — William S. Wollner, P. O. Box 458, San Rafael, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Cal., and Hotel Biltmore, Los Angeles, Calif.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago 3, Illinois. Annual dinner, November 21, 1946, Waldorf-Astoria Hotel, New York, N. Y.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION. —J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Exhibit in conjunction with meetings of A. A. R. Mechanical Division and Purchases and Stores Division, June 23-28, 1947, Convention Hall, Atlantic City, N. J.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis, Mo. Annual meeting, September 23-25, 1947, Arlington Hotel, Hot Springs, Ark.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September, 1947.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS. —D. W. Brantley, C. of Ga., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

A list of current publications appears on page 783.

Equipment and Supplies

LOCOMOTIVES

The ATCHISON, TOPEKA & SANTA FE has ordered 4 6,000-hp. Diesel-electric road locomotives from the American Locomotive Company, and 6 of the same type locomotives from Electric-Motive division, General Motors Corporation.

FREIGHT CARS

The ATCHISON, TOPEKA & SANTA FE has ordered 250 50-ton box cars from the Pullman-Standard Car Manufacturing Company. Inquiry for these cars was reported in the *Railway Age* of September 21.

The READING has ordered 1,000 50-ton steel box cars from its shops at Reading, Pa. The construction cost will amount to $4,250,000. Of the 1,000 cars, 800 will be 40-ft. 6-in. long and 200 will be 50-ft. 6-in. long. In addition, 25 steel caboose cars will be constructed in Reading at a cost of $140,000. If material is available, the work will begin early in 1947 and eight cars will be built every 24 hours.

SIGNALING

THE ELECTRO-MOTIVE DIVISION, GENERAL MOTORS CORPORATION has ordered four sets of continuous induction train control equipment from the General Railway Signal Company for installation on Diesel-electric passenger locomotives for the Chicago & North Western.

Supply Trade

Urban C. Weidner, former assistant secretary of the **Union Spring & Manufacturing Co.,** New Kensington, Pa., has been appointed purchasing agent to succeed the late **Joseph. D. Horton.**

Taylor-Reed & Co., 915 Olive street, St. Louis 1, Mo., have been appointed sales-engineering representatives, railroad division of the **American K. A. T. Corporation.**

W. Downing Messimer has been appointed direct factory representative for the **Ajax-Consolidated Company** on railroads in the northeastern section of the country, with headquarters in New York.

John R. Newkirk, former chief engineer in charge of production engineering, research, and development, has been elected vice-president in charge of all plant operations of the **National Pneumatic Company,** Rahway, N. J.

After spending five years acquiring practical shop experience, Mr. Newkirk entered

John R. Newkirk

the engineering department of the Baltimore & Ohio at its Newark, Ohio, terminal. Resigning to join the Jewett Car Company at Newark, he served as car designer, chief draftsman and superintendent of shops, respectively, holding the last position until 1919, when he became associated with the sales department of National Pneumatic.

J. B. Austin, assistant director of the research laboratory of the **United States Steel Corporation** of Delaware, will become director of the laboratory upon the retirement of **John Johnston,** it has been announced.

O. J. Malina, formerly mid-west representative, has been appointed sales manager of the heating and ventilating division of the **D. J. Murray Manufacturing Company,** Wausau, Wis., with headquarters as before in Chicago.

The American Manganese Steel division of the **American Brake Shoe Company,** Chicago Heights, Ill., has announced the following appointments: **A. R. Sittig,** manager of manganese steel sales and **E. L. Quinn,** assistant vice-president in charge

News Department continued on next left-hand page

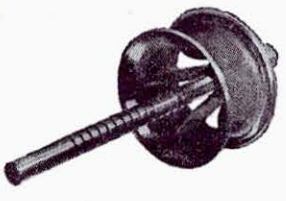
Give EXISTING LOCOMOTIVES THE POWER

...for today's needs

Thousands of locomotives now in service were built at a time when modern high speed operation with heavy trains was not contemplated. But today high speed is essential both in passenger and freight service.

Fortunately, many of the older locomotives can be adapted to meet the changed conditions by the installation of The Franklin System of Steam Distribution.

Conversion, using The Franklin System, is the most practical and economical method of quickly providing the increased horsepower required to haul heavy trains at high speeds.



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

of welding products, both with headquarters in Chicago Heights, and **E. J. Nist,** assistant vice-president, with headquarters in New York.

H. B. Lilley, formerly development engineer on alloy mechanical tubing for the **Timken Roller Bearing Company,** has been appointed district manager of the steel and tube division, with headquarters in Houston, Tex.

The **Eastern Engineering Company,** New Haven, Conn., has been consolidated with the **Automatic Signal Corporation,** East Norwalk, Conn., the resulting firm to be known as **Eastern Industries, Incorporated.** Personnel of both operating divisions will remain substantially the same.

D. C. Webster has joined the **Standard Railway Equipment Manufacturing Company** as assistant chief engineer, with headquarters at Hammond, Ind. Mr. Webster was born at Ogden, Utah, and received the majority of his primary education at Omaha, Neb. He was graduated from the University of Nebraska in 1934, with a B. S. degree in civil engineering. Before his college work, he entered the

D. C. Webster

employ of the Union Pacific at Omaha as an office boy and laborer. From 1928 to 1930, he was associated with the mechanical and stores departments at Laramie, Wyo., and Cheyenne., and later worked in the engineering, bridge and building, and maintenance of way departments. In 1935 he joined the Pacific Fruit Express Company, for which he was engineer of car construction at the time of his new appointment.

The **Liquid Conditioning Corporation** of New York has announced the following appointments in its engineering, sales and service field force: **Ira J. Bready,** district manager in the Cincinnati, Ohio, territory; **B. F. Soffe,** district manager in the lower Michigan district, with headquarters in Detroit, Mich., and **H. H. Morrison,** district manager in the central and lower south, with headquarters in Chattanooga, Tenn.

Formation of the **East Chicago Machine Tool Corporation,** with headquarters at 4722 Railroad avenue, East Chicago, Ind., effective November 1, has been announced by **W. L. Fox,** president of the new concern. Mr. Fox, who resigned as superintendent of the Belt Railway of Chicago and the Chicago & Western Indiana in July, 1944, to become vice-president of the Coach & Car Equipment Corp., Chicago, left the latter position on June 10, 1946, to become president of the Famous Manufacturing Company, which position he will retain.

George P. Torrence, executive vice-president of the **Link-Belt Company,** Chicago, has been elected president of the firm to succeed **William C. Carter,** who continues as a director of the company and chairman of its board of directors' executive committee.

Mr. Carter, was born near Homer, Ill., on October 10, 1881, and received his higher education at the University of Illinois, where he was graduated in 1902 with a B.S. degree in mechanical engineering. Shortly afterwards he became a machinist's helper for the Commonwealth Edison Company, and in August, 1902, he accepted a position as draftsman in the Link-Belt's Pershing Road plant at Chicago. He held successively the positions of engineering department supervisor, construction superintendent, plant superintendent, plant general manager, vice-president in charge of production, and executive vice-president. He was elected president in December, 1942.

OBITUARY

Homer V. McKedy, New York railway sales representative of the Patterson-Sargent Company for 22 years, died on October 30.

Roswell D. Grant, vice-president of The Pyle-National Company, Chicago, died suddenly at his home in that city on October 29. He had been associated with the firm for 33 years.

L. Lewis Cohen, chairman of the board of directors, Union Asbestos & Rubber Co., whose death on October 25, was reported in the *Railway Age* of November 2, was born on May 7, 1891, at Chicago. In his youth he worked for both the Union Pacific and Southern Pacific, and later became secretary of Julius Kruttschnitt, at one time chairman of the Southern

L. Lewis Cohen

Pacific's executive committee. Mr. Cohen was associated for a time with the sales department of Johns-Manville Sales Corporation. In 1916 he founded the Union Supply Company, and in 1918, he organized the Union Asbestos Rubber Co. He was president of the latter firm until 1941, when he retired because of ill health and became chairman of its board of directors.

Financial

ATCHISON, TOPEKA & SANTA FE.—*Promissory Notes.*—This road has accepted three bids for promissory notes to finance the cost of certain new equipment. The notes were awarded, under conditional sales agreements, as follows: $927,800, representing 80 per cent of the cost of 250 50-ton steel box cars, to the Central Hanover Bank & Trust Co., New York, at 1.6475 per cent; $2,352,000, representing 80 per cent of the cost of 350 40-ton steel refrigerator cars, to the First National Bank, Kansas City, Mo., at 1.495 per cent; and $2,024,000, representing 80 per cent of the cost of 4 6,000-hp. Diesel-electric locomotives, to the Northern Trust Company, Chicago, at 1.5 per cent. Bids received in connection with the purchase of 6 6,000-hp. Diesel-electric road locomotives and 750 50-ton steel box cars were rejected. (See the *Railway Age* for October 26, page 704.)

ATLANTIC & EAST CAROLINA.—*Note.*—This road has applied to the Interstate Commerce Commission for authority to issue a $100,000 collateral trust note to be secured by passenger and freight bills due the applicant by the United States Government. The note, to bear interest at the annual rate of 3 per cent, will be issued by and delivered to the First-Citizens Bank and Trust Company or Kinston, N. C. The applicant said that the government owed it $323,126.58 as of August 31, on freight and passengers transported in and out of Cherry Point, N. C. It explained that proceeds of the note will be used to make payments due connecting roads, thereby making it unnecessary for the applicant's officers and stockholders to borrow bank funds on their personal notes for that purpose.

CHICAGO, ROCK ISLAND & PACIFIC.—*Third Bond Retirement Plan.*—The preferred stockholders of this road have filed in Federal District Court, Chicago, a third proposal whereby the Rock Island may reduce its debts. The proposal asks that the trustees issue an invitation for tenders for all of the road's bonds, including unpaid interest coupons, and report back to the court. The court and trustees would then decide which tenders would be taken up. Two previous plans have been proposed—one by Aaron Colnon, co-trustee of the road (see *Railway Age* for October 5, page 582), and one by the debtor company, on October 28 (see *Railway Age* for November 2, page 743).

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization.*—Division 4 of the Interstate Commerce Commission has set back from November 19 to January 7, 1947, the further hearing in connection with this road's plan of reorganization under Section 77 of the Bankruptcy Act. The January 7 hearing will be held at Washington, D. C., before Roger T. Boyden, chief, Reorganization Section, Bureau of Finance, and Examiner Harvey H. Wilkinson. The same order also contained a commission denial of a request made by the protective com-

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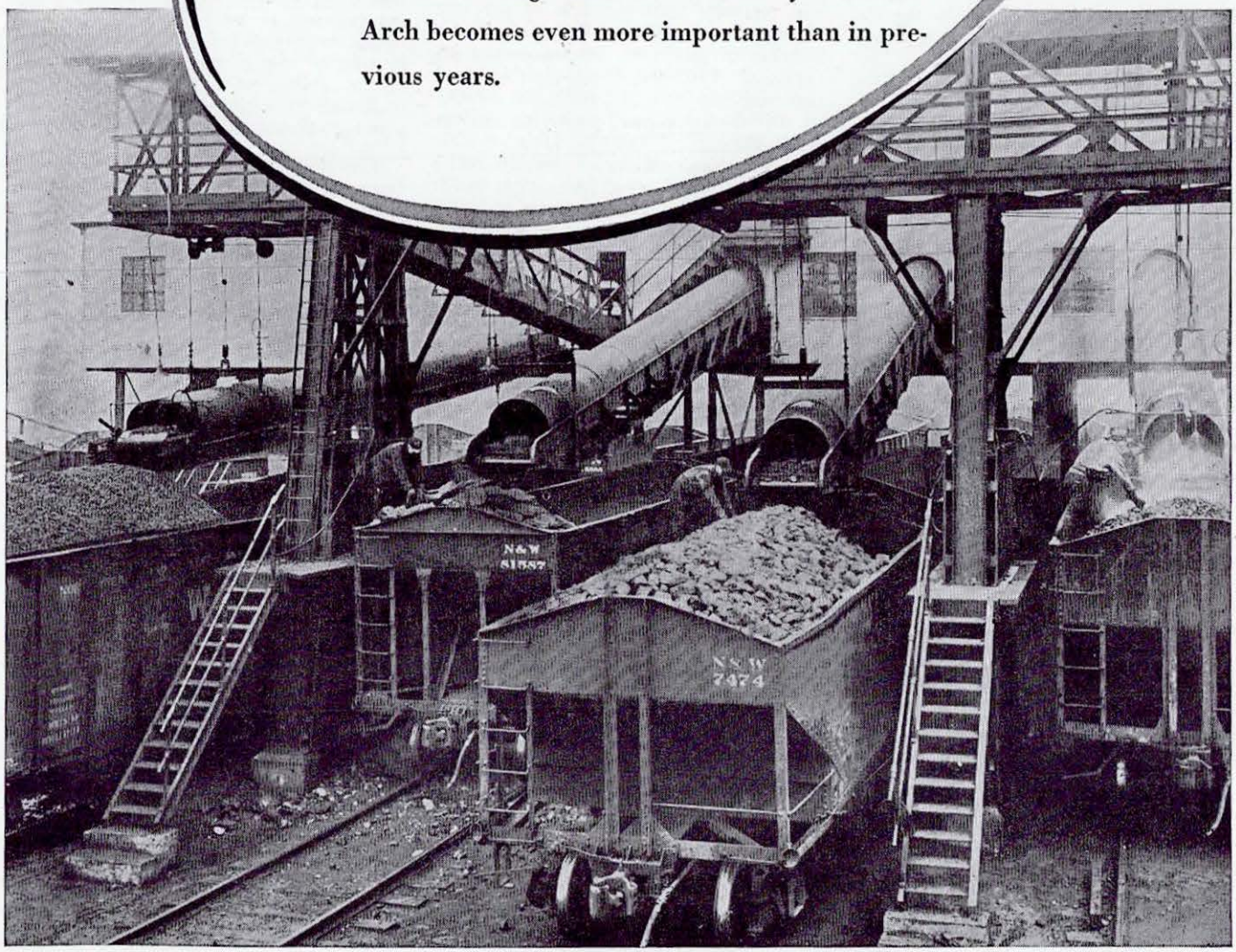
LOCOMOTIVES THAT "EAT" TOO MUCH!

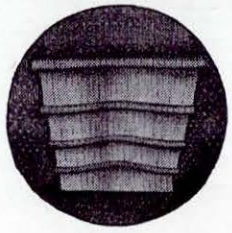
A locomotive may have an abnormal appetite for fuel because it is not getting maximum power from the coal it burns.

One measure for assuring fuel efficiency is to make certain that a complete brick arch in the firebox is maintained at all times.

And with the steadily increasing cost of coal, the fuel-saving value of a Security Sectional Arch becomes even more important than in previous years.



HARBISON-WALKER REFRACTORIES CO.
Refractories Specialists



AMERICAN ARCH CO. INC.
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Locomotive Combustion Specialists

mittee for the debtor's preferred stock that the time within which the road shall file a new plan of reorganization should be the period of 6 months from and after June 28. The same committee also had asked the commission to postpone the hearing indefinitely.

The order was accompanied by a notice from I. C. C. Secretary W. P. Bartel, which said the hearing is to be held for the purpose of receiving further evidence with respect to the matters requiring further consideration by the commission pursuant to the opinion and order of the District Court of the United States, Northern District of Illinois, Eastern Division, entered June 28, which referred the proceedings back to the commission. (See *Railway Age* for September 14, page 454.)

DENVER & RIO GRANDE WESTERN.—*Acquisition.*—Division 4 of the Interstate Commerce Commission has authorized this road to acquire and operate approximately 10 miles of track, incuding switching and spur tracks, between Provo, Utah, and Orem. The segment, sold for $7,000 to the applicant at a receiver's sale, formerly was operated by the Salt Lake & Utah. The latter road was authorized to abandon the line in April.

DENVER & RIO GRANDE WESTERN.—*Reorganization Plan Ordered Effective.*—This road's reorganization plan was ordered into effect on October 30, by Federal District Judge J. Foster Symes, at Denver, Colo., following the refusal last week of the Supreme Court to review the reorganization proceeding (*Railway Age* of November 2, page 741). A notice of appeal has been filed in the Circuit Court of Appeals by the debtor company, which in seeking a modification of the plan. Approved first by Judge Symes on October 25, 1943, the plan provides for the merger of the D. & R. G. W. with the Denver & Salt Lake, which has already been authorized by a favorable 90 per cent vote of the latter road's bondholders. Capitalization of the new company under the plan will consist of the following securities: Equipment-trust obligations, $5,758,000; new first mortgage Series A bonds, $38,573,680; new income mortgage 4½ per cent bonds, $29,750,184; bonds of the Denver & Salt Lake, $11,234,000; a secured note, or notes, to the Chase National Bank, in the approximate amount of $2,158,458; $32,531,220, par value, of new 5 per cent preferred stock; and $35,167,585, par value, of new common stock.

GREAT NORTHERN.—*Promissory Notes.*—This road has requested bids by November 14 for the lowest interest rate at which the bidders will provide $2,700,000 to finance approximately 70 per cent of the cost of 24 new passenger cars, six Diesel-electric locomotives and one electric locomotive. The equipment will be sold to the road under conditional sales agreements under which 30 per cent of the purchase price will be paid upon acceptance of the equipment and the balance in 60 equal monthly installments beginning on December 16, 1940.

PITTSBURG, SHAWMUT & NORTHERN.—*Reorganization.*—Division 4 of the Interstate Commerce Commission has set $750 per month as the maximum compensation to be paid to Thomas C. Buchanan and Robert C. Sproul, Jr., for services rendered as trustees in connection with the reorganization of this road, "provided that while each of them serves as trustee, the only compensation he shall receive from the debtor . . . shall be that allowed him by the court as such trustee within the maximum limits so fixed . . . " (See *Railway Age* of October 19, page 663.)

TEXAS & NEW ORLEANS.—*Bonds.*—Division 4 of the Interstate Commerce Commission has modified its order of May 19, 1944, in the Finance Docket No. 14543 proceeding, thereby reducing from $16,178,000 to $9,000,000 the amount of first and refunding mortgage bonds, Series A, to be issued by this road. (See *Railway Age* for October 26, page 705.)

WESTERN MARYLAND.—*Equipment Trust Certificates.*—This road has applied to the Interstate Commerce Commission for authority to assume liability for $2,740,000 of series K equipment trust certificates, which will represent approximately 80 per cent of the cost of equipment which the applicant proposes to purchase. The equipment includes 2 1,500-hp. Diesel-electric road switching engines at $125,000 each; 2 1,000-hp. Diesel-electric yard switching engines at $89,000 each; 2 1,000-hp. Diesel-electric yard switching engines at $89,500 each; 200 50-ton steel-sheathed box cars at $4,299 each and 600 55-ton steel hoppers at $3,273 each. The Baldwin Locomotive Works and the American Locomotive Company each will build one of the Diesel-electric road locomotives and two of the yard locomotives. The Bethlehem Steel Company will build the box cars and hoppers.

The certificates, dated November 15, will mature in 10 equal annual installments of $274,000, starting November 15, 1947. They have been sold to Halsey, Stuart & Company, Inc., of New York, whose bid of 99.279 per cent with a dividend rate of 1¾ per cent has been accepted by the applicant, subject to commission approval.

Average Prices Stocks and Bonds

	Nov. 1	Last week	Last year
Average price of 20 representative railway stocks..	48.88	47.26	62.03
Average price of 20 representative railway bonds..	90.05	88.84	99.77

Dividends Declared

Cleveland & Pittsburgh. — 7% guaranteed, 87½¢, quarterly; 4% special guaranteed, 50¢, payable December 2 to holders of record November 12.

Reading. — 4% non-cum. 1st preferred, 50¢, quarterly, payable December 12 to holders of record November 21.

Construction

NEW YORK CENTRAL.—This road, and the Dow Chemical Company, Midland, Mich., have awarded contracts to the Jones Contracting Company, Inc., Detroit, for the construction of a new connection with the N. Y. C. and of a new yard at Midland. The construction, to cost approximately $400,000, includes grading, drainage and about seven miles of track work.

Abandonments

SOUTHERN PACIFIC.—Adopting the recommended findings of a proposed report by Examiner Lucian Jordan, as noted in *Railway Age* of September 21, page 499, Division 4 of the Interstate Commerce Commission has denied an application of this road for authority to abandon a portion of its so-called Fruto Branch, extending approximately 11.1 miles from Kurand, Calif., to Fruto.

"It is apparent from the record that the proposed abandonment would result in serious inconvenience to the general public," the commission found. "While the volume of traffic handled since 1943 has been so low that the revenues earned did not equal the necessary expenses incident to operation. the record shows that the business of the line will be increased materially and that such increase will be maintained for several years. The contention of the applicants that the revenues from timber traffic are not sufficient to meet the operating costs cannot be considered of sufficient weight to warrant the abandonment, particularly in the absence of a showing that every reasonable effort has been made to secure a proper adjustment of such rates."

SUMPTER VALLEY.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon a 57-mile line from a point near Bates, Ore., to South Baker. The applicant will operate motor carrier service over routes formerly served by the rail line, abandonment of which becomes effective upon the commencement of the motor carrier service.

Railway Officers

EXECUTIVE

The board of directors of the newly organized Chicago, North Shore & Milwaukee has elected **Bernard J. Fallon,** former executive officer, as president of the new company. Other officers are: **Clement A. Whonsetler,** vice-president in charge of finance; **H. M. Lytle,** vice-president in charge of public relations; **J. H. M. Clinch,** secretary-treasurer, and **Manferd Burleigh,** chairman, board of directors.

Frank R. Layng, whose election to vice-president and chief engineer of the Bessemer & Lake Erie was reported in the *Railway Age* of October 5, was born at Salem, Ohio, on September 9, 1878. Mr. Layng received his education in the public schools of Pittsburgh and at the Western University of Pennsylvania (now the University of Pittsburgh). He entered railroad service on October 1, 1897 as rodman on the Buffalo and Alleghany division of the Pennsylvania, serving in this capacity until August 1, 1900, when he went with the Bessemer & Lake Erie, with which road he has since served. From 1900 to 1902 Mr. Layng served as draftsman at Pittsburgh, Pa., becoming assistant engi-

News Department continued on next left-hand page

INSURANCE AGAINST FREEZING OF SUCTION LINES

The *Elesco* THERMOSTATIC HEATER VALVE

"Turn it on and leave it on"

THE SUPERHEATER COMPANY

Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
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neer on the latter date. In 1903 he was appointed engineer bridges and buildings and in 1906 he became engineer of track. Mr. Layng was promoted to assistant chief engineer in 1928 and in 1931 he became

Frank R. Layng

chief engineer, which position he still holds in addition to the vice-presidency. Mr. Layng is a past president of the American Railway Engineering Association.

FINANCIAL, LEGAL AND ACCOUNTING

Lawrence Chaffee, general attorney of the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette, with headquarters at Richmond, Va., has been transferred to Cleveland, Ohio.

A. W. Lavidge, assistant general auditor of the Chicago, Burlington & Quincy, with headquarters at Chicago, has been promoted to general auditor, succeeding **Shirley L. Porter,** whose death on October 26, was reported in the *Railway Age* of November 2. **J. F. Blair,** auditor of expenditures, succeeds Mr. Lavidge as assistant general auditor.

F. Bennett, freight agent of the Chicago, Indinanpolis & Louisville, with headquarters at Chicago, has been promoted to freight claim agent, succeeding **F. C. Berghaus,** whose promotion to assistant to general manager is reported elsewhere in these columns. **W. P. Sullivan,** land and tax agent, has been promoted to manager of real estate, with headquarters at Lafayette, Ind.

Fred J. Miller, assistant chief claim agent of the New York Central, with headquarters at Chicago, has been promoted to chief claim agent at Detroit, Mich. He succeeds **William J. Holden,** who has been transferred to Chicago, succeeding **Harry A. Fathauer.** Mr. Fathauer has been transferred to New York, where he succeeds **Stephen W. Dill,** who has retired. **Maurice N. Ray,** assistant to chief claim agent, Chicago, has been promoted to assistant chief claim agent.

Ralph S. Bird, assistant to comptroller of the Delaware, Lackawanna & Western, has been promoted to assistant comptroller, with headquarters as before at New York, succeeding **Robert O. Collins,** who retired on October 31, at his own request, under the pension rules of the company, after more than 40 years of service. **J. H. O'Neill,** tax accountant, has been promoted to assistant to comptroller, to succeed Mr. Bird. The position of tax accountant has been abolished.

Mr. Collins was born in Brooklyn, N. Y., on December 10, 1879, and entered railroad service on January 2, 1906, as clerk in the accounting department of the Delaware, Lackawanna & Western. He was promoted to auditor of miscellaneous accounts in February, 1914, and became auditor of disbursements in October, 1918. Mr. Collins was appointed assistant comptroller in October, 1930, the position he held until his retirement.

Heber Smith, whose promotion to freight claim agent of the Southern Pacific, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of October 12, was born on October 16, 1891, and began his railroad career in 1908 as a stenographer with the S. P. at Sacramento, Cal. Mr. Smith was subsequently a plumber's helper and roadmaster's clerk,

Heber Smith

and in 1910 he joined the Western Pacific, with which he held the positions of stenographer, clerk, accountant and brakeman. In 1914, following a period when he held various positions with several railroads, he rejoined the S. P. as roadmaster's clerk. Other positions he held are as follows: May, 1916, secretary to district freight agent, Sacramento; November, 1916, secretary to freight claim agent, San Francisco; 1917, Troop Movement section, American Railroad Association; 1918, head clerk, freight claim department; 1920, special claim adjuster, San Francisco and Los Angeles, Cal.; 1929, chief claim adjuster, San Francisco. In 1941 Mr. Smith was promoted to assistant freight claim agent at Los Angeles, and in 1945, was transferred to San Francisco. He held the latter position at the time of his recent promotion.

OPERATING

James C. Bailey, whose promotioin to general manager of the Bessemer & Lake Erie at Pittsburgh, Pa., was reported in the *Railway Age* of October 5, was born at Meadville, Pa., on June 9, 1883. Mr. Bailey attended the State Normal School at Edinboro, Pa., and entered railroad service on February 27, 1902, as telegraph operator with the Bessemer & Lake Erie, serving continuously with that road since that time. On May 1, 1904, he became clerk and in

James C. Bailey

1906 he was appointed timekeeper. He became car service agent on November 1, 1917, and on July 1, 1933, he was promoted to assistant to general superintendent. On February 1, 1940, Mr. Bailey became assistant general superintendent and on January 16, 1942, he was promoted to general superintendent, which position he held until his recent promotion to general manager.

Alton D. Schadt, whose promotion to assistant general manager of the Bessemer & Lake Erie at Pittsburgh, Pa., was reported in the *Railway Age* of October 5, was born on April 26, 1907, at Greenville, Pa. Mr. Schadt received his B.S.C. degree from the School of Commerce, Temple University, Philadelphia, Pa., in 1929, and did graduate work on statistics and economics at the University of Pittsburgh from 1935 to 1936. He entered railroad service in June, 1923, with the Bessemer & Lake Erie as a clerk in the car

Alton D. Schadt

service office at Greenville, Pa., during school vacation and subsequently did part time work until November, 1923. From October, 1926, to January, 1927, he did part time work for the Railway Express Agency at Philadelphia. On July 1, 1929, Mr. Schadt went with the Bessemer & Lake Erie as clerk in the office of the

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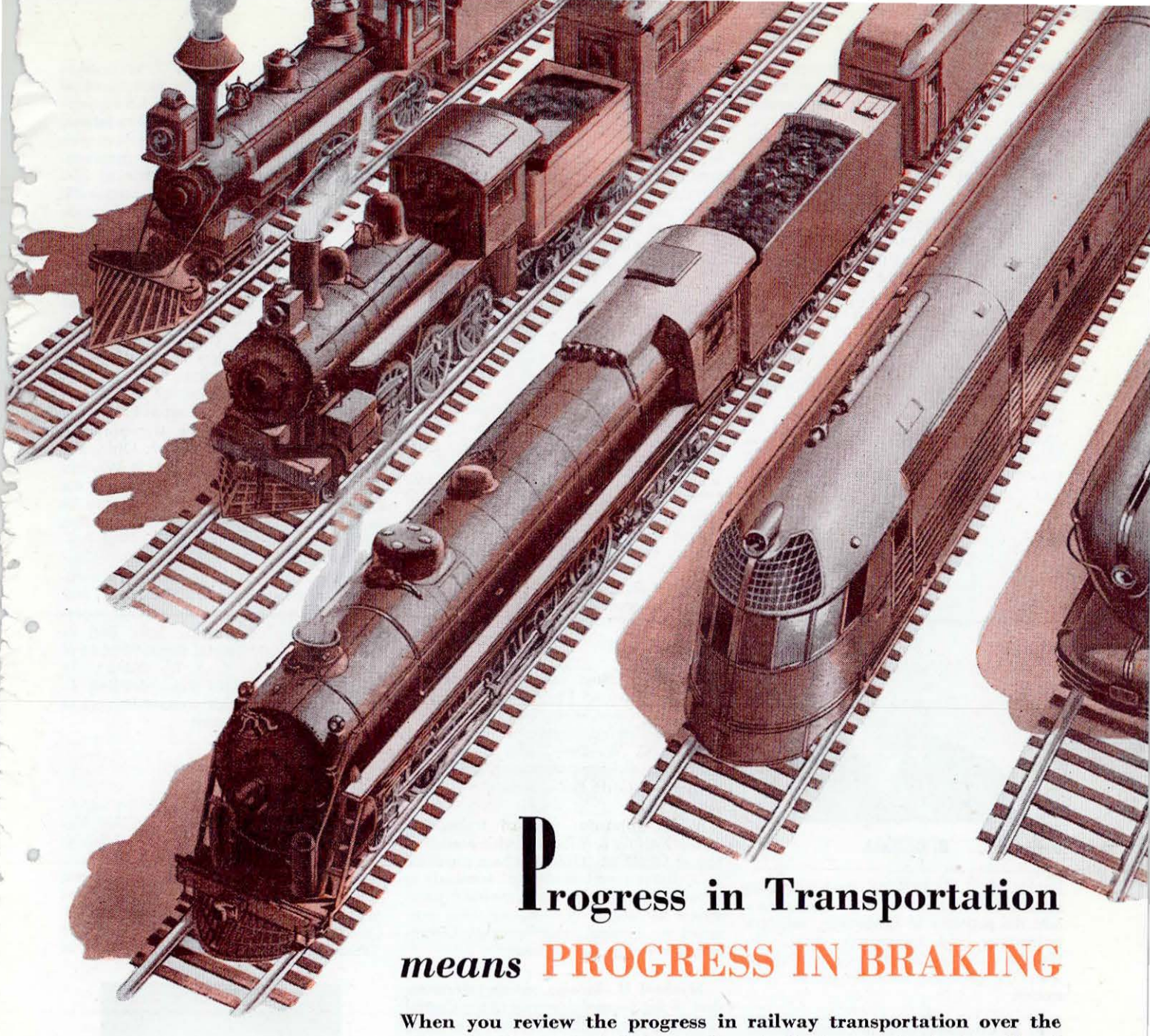

Progress in Transportation

means PROGRESS IN BRAKING

When you review the progress in railway transportation over the years, one important fact stands out: Brakes are basic to railroad progress. That's why every advance in power, speed and capacity is accompanied and accelerated by a commensurate advance in the brake system.

Expanding passenger travel creates expanded emphasis on adequate braking. With the current trend toward higher speeds in passenger service, trains need a brake to match their increased "go" power. It's ready and waiting, in the Westinghouse "HSC" electro-pneumatic brake.

For the utmost in performance for passenger safety and comfort, we recommend this proven combination:

"HSC" Electro-Pneumatic Brake **. . . for brake flexibility to match modern train speeds, and unequaled smooth action.** ***Speed Governor Control*** **. . . for regulating brake forces to wheel speeds.** ***"AP" Decelostat*** **. . . for wheel slip detection to keep the wheels rolling.**

Brakes are Basic to Railroad Progress

Westinghouse Air Brake Co.

WILMERDING, PA.

vice-president and general manager at Pittsburgh, becoming office assistant in the general manager's office there on October 16, 1939. He was appointed assistant to general manager on July 23, 1943, which position he held until October 1, when he was promoted to assistant general manager.

Lewis A. Collins, acting general manager of the Union Pacific, Northwest district, has been promoted to general manager, with headquarters as before at Portland, Ore. **George J. Mulick,** general superintendent at Portland, has been named assistant to general manager.

B. G. Nash, whose promotion to division superintendent of the Pere Marquette, with headquarters at Detroit, Mich., was reported in the *Railway Age* of October 19, was born on December 27, 1907, at Nashville, Tenn., and entered the service of the road in 1924 as a yard clerk at Grand

B. G. Nash

Rapids, Mich. In 1934 Mr. Nash was made switchman at Detroit, and subsequently held the positions of yardmaster, assistant trainmaster and trainmaster there. In 1943 he was transferred to Grand Rapids, where he remained until his current promotion.

F. E. Cheshire, chief mechanical officer of the Chicago, Indianapolis & Louisville, with headquarters at Lafayette, Ind., has been promoted to general manager, with the same headquarters. Mr. Cheshire will continue to administer the duties of his former position until a successor has been named. **F. C. Berghaus,** freight claim agent, has been advanced to assistant to general manager, with headquarters as before at Chicago. A photo and sketch of Mr. Cheshire appeared in *Railway Age* of August 10, in connection with his appointment as chief mechanical officer.

G. B. Matthews, whose promotion to general superintendent of the St. Louis Southwestern, with headquarters at Tyler, Tex., was reported in the *Railway Age* of October 26, was born on November 16, 1892, at Macon, Ga., and began his railroad career in 1907 as a clerk of the Kansas City, Memphis & Birmingham (now St. Louis-San Francisco), at Birmingham, Ala. He subsequently held positions as caller, yard clerk, clerk, and various other positions in the offices of superintendent, trainmaster and chief dispatcher of the Southern. From 1913 to 1917 he was associated with the Atlanta, Birmingham & Atlantic (now part of the Atlantic Coast Line), as per diem clerk, chief clerk to superintendent of transportation, and chief clerk to general manager. Following two years' service in World War I, and during the period of Federal control, he served as statistician and chief clerk to general manager and as inspector of operations, A. B. & A.; Atlanta & West Point; Georgia; Charleston & Western Carolina; Georgia & Florida and St. L.-S. F. east of the Mississippi river. In 1920 he returned to the A. B. & A. as car accountant and assistant general superintendent of transportation. Other positions that have been held by Mr. Matthews are as follows: May-July, 1920, car distributor, Fruit Growers Express Company; July, 1920-July, 1921, superintendent transportation, Georgia & Florida, at Augusta, Ga.; July, 1921-Dec., 1922, chief clerk, assistant superintendent transportation, Mobile & Ohio (now Gulf, Mobile & Ohio), St. Louis, Mo. In December, 1922, Mr. Matthews joined the St. L. S. W. as transportation assistant, and was later made assistant to vice-president. In 1931 he was advanced to superintendent transportation, which position he held until his current promotion.

G. W. Griffing, assistant superintendent of the Missouri Pacific, with headquarters at McGehee, Ark., has resumed that position following a leave of absence. He succeeds **C. W. Ivey,** who resumes his position as division trainmaster, with headquarters at Little Rock, Ark.

A. E. Johnson, terminal trainmaster of the Norfolk & Western, with headquarters at Cincinnati, Ohio, has been promoted to assistant superintendent of terminals at Roanoke, Va. **C. H. Hale,** assistant trainmaster at Iaeger, W. Va., has been promoted to terminal trainmaster at Cincinnati, succeeding Mr. Johnson.

Michael H. Strollo, acting superintendent of the Southern division of the Central of New Jersey, with headquarters at Long Branch, N. J., has been appointed superintendent of that division and the New York & Long Branch, with the same headquarters, succeeding **Raymond F. Dickerson,** who has been appointed assistant to the general manager, with headquarters at Jersey City, N. J. Mr. Dickerson had been superintendent of the Southern division and the New York & Long Branch since October 16, 1944, but since July 1, 1945, had been assigned to special duties.

R. C. Parsons, assistant vice-president and assistant general manager (transportation and mechanical) of the Louisville & Nashville, with headquarters at Louisville, Ky., has been promoted to general manager, succeeding to the duties of **W. E. Smith,** whose retirement as vice-president and general manager was reported in the *Railway Age* of October 26. **G. C. Howard,** assistant director of personnel, has been advanced to director of personnel, succeeding to the duties of **L. L. Morton,** whose photo and biography appeared in the *Railway Age* of November 2, in connection with his promotion to vice-president in charge of operations. **C. D. Love,** general superintendent, and **C. A. Bradshaw,** assistant to general manager, each have been promoted to assistant general manager. A photo and biographical sketch of Mr. Love appeared in *Railway Age,* August 25, 1945. **T. D. Williams,** assistant superintendent-chief dispatcher, with headquarters at Pensacola, Fla., has been advanced to general superintendent.

F. J. DeGrief, whose retirement as superintendent of the Lake Erie & Western district of the New York, Chicago & St. Louis, with headquarters at Muncie, Ind., was reported in the *Railway Age* of October 26, was born on November 15, 1869, at Phillipsburg, Ohio. He entered railroad service in 1890, with the transportation department of the Baltimore & Ohio, and in 1892 he joined the Lake Erie & Western (now Nickel Plate) as chief clerk in the mechanical department. Other positions he has held are as follows: 1900, dispatcher, general yardmaster, Lima, Ohio; 1903, general yardmaster, Muncie; 1906-1920, successively, chief train dispatcher, trainmaster, and superintendent, Lafayette, Ind. In 1920 he was advanced to general superintendent at Indianapolis, Ind., and in 1928 he was made general superintendent of the Cloverleaf—L. E. & W. district. In 1932 he was appointed superintendent, L. E. & W. district, which position he held at the time of his retirement.

TRAFFIC

James Joseph Quinn, assistant superintendent, Eastern division, Canadian National Express, with headquarters at Montreal, Que., has been promoted to superintendent there, succeeding **R. H. Jones,** who has retired after more than 46 years of service. Mr. Quinn was born at Bedford, Que., and entered the service of the Grand Trunk as parcel room clerk in 1909 at

James Joseph Quinn

Sherbrooke, Que. Transferring to the Canadian Express Company in 1913, he became cashier in 1916 and after the formation of the Canadian National Express he became chief clerk in 1923. Five years later he went to St. John, N. B., as agent

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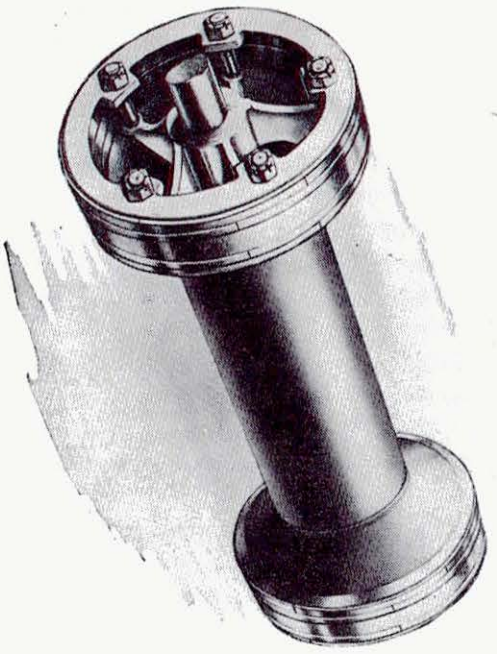
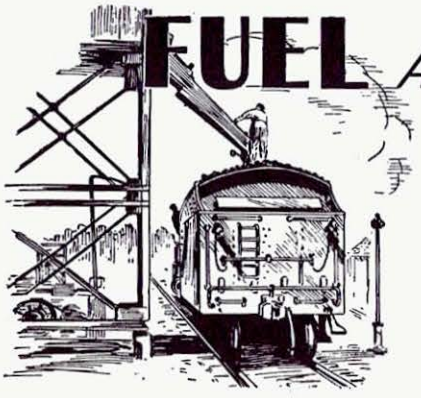
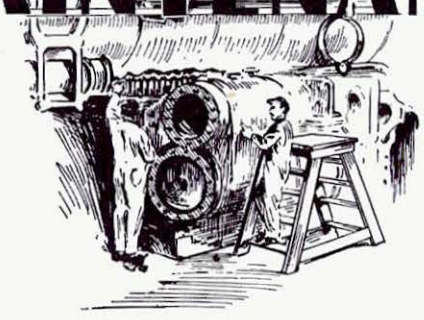


FUEL AND MAINTENANCE





HUNT-SPILLER Light Weight Valves team with Hunt-Spiller alloy steel pistons to reduce steam locomotive fuel consumption and maintenance. Lighter parts noticeably lessen the wear on bushings and other components, help increase availability.

Ease and speed of disassembling is a further advantage of Hunt-Spiller Light Weight Valves. You do not have to remove the cumbersome valve rod because packing and bull rings are held in place by a simple arrangement of follower rings, secured at each end by five nuts. Learn about these and other advantages from the Hunt-Spiller representative. Hunt-Spiller Mfg. Corporation, 383 Dorchester Ave., Boston 27, Mass.

HUNT-SPILLER

LIGHT WEIGHT
STEEL PISTONS AND VALVES
DUPLEX SECTIONAL PACKING
AIR FURNACE GUN IRON

and in 1937 became traffic supervisor at Montreal, later serving as special representative and acting general agent. Mr. Quinn was promoted to assistant superintendent of the Eastern division in 1944, which position he held until his recent promotion.

The office of general agent of the Erie at Washington, D. C., has been moved from 903 Southern building to room 515 Bond building, 14th street and New York avenue, N. W.

W. W. Brown, whose promotion to assistant freight traffic manager of the New York, Chicago & St. Louis, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of October 19, was born on June 8, 1899, and began his railroad career with the Nickel Plate in 1924, as a freight representative in Chicago. In 1928 Mr. Brown was advanced to general agent at Omaha, Neb., and in 1931, was transferred to Pittsburgh, Pa. He was promoted to assistant general freight agent

W. W. Brown

in 1941, with headquarters at Chicago, and he was further advanced to general freight agent at St. Louis, in 1944. He held the latter position at the time of his current promotion.

J. Cibulka has been appointed chief of tariff bureau, Chicago, & Eastern Illinois, with headquarters at Chicago, succeeding **M. A. Smith,** whose promotion to assistant general freight agen was reported in the *Railway Age* of November 2.

J. R. Mulroy, who until recently has operated the Mulroy Coal Company, Chicago, has been appointed assistant general freight agent of the Chicago, Indianapolis & Louisville, with headquarters at Chicago. Mr. Mulroy will supervise the road's coal traffic solicitation activities.

ENGINEERING & SIGNALING

W. H. Brameld, assistant to chief engineer maintenance of way of the Erie, with headquarters at Cleveland, Ohio, has retired after 47 years of service.

J. C. Bussey, maintenance engineer, Cincinnati Union Terminal, Cincinnati, Ohio, has been appointed chief engineer of the Chicago, Indianapolis & Louisville, with headquarters at Lafayette, Ind. He succeeds **Anton Anderson,** who will remain with the road in an advisory capacity until his retirement on December 31.

E. G. Stradling, superintendent of telegraph and signals of the Chicago, Indianapolis & Louisville, at Lafayette, Ind., will retire on December 1.

H. B. Hoyt, assistant division engineer of the Baltimore & Ohio, at East Salamanca, N. Y., has been appointed division engineer of the Buffalo division, with headquarters at Punxsutawney, Pa., where he succeeds **William E. Kearfott,** whose recent death in that city is reported elsewhere in these columns.

MECHANICAL

G. F. Lake has been appointed master mechanic of the Nevada Northern, with headquarters at East Ely, Nev., succeeding **T. F. Lake,** who died on October 23.

SPECIAL

George Hodge, manager of the department of personnel, Canadian Pacific, with headquarters at Montreal, Que., has retired, following 56 years of railroad service. Mr. Hodge was born on October 2, 1874, at Montreal, and began his railroad career with the C. P. in 1890, as an office boy in the passenger traffic department. He advanced through the positions of junior clerk, secretary to the vice-president and chief clerk to the vice-president until 1907, when he was made superintendent at Montreal. He served in this position also at London, Ont., and in 1912, returned to Montreal as general superintendent. In 1915 he was advanced to assistant to general manager, Eastern lines, and in 1918, was made assistant to vice-president, Eastern lines. He was further advanced to assistant general manager, Eastern lines, in 1922, and in 1931 he was made manager of the department of personnel. During World War II Mr. Hodge was a technical adviser to the National War Labor Board, at Ottawa, Ont.

OBITUARY

Dr. U. A. Noble, president of the Mississippi Central, died of a heart attack recently. He was 69 years old.

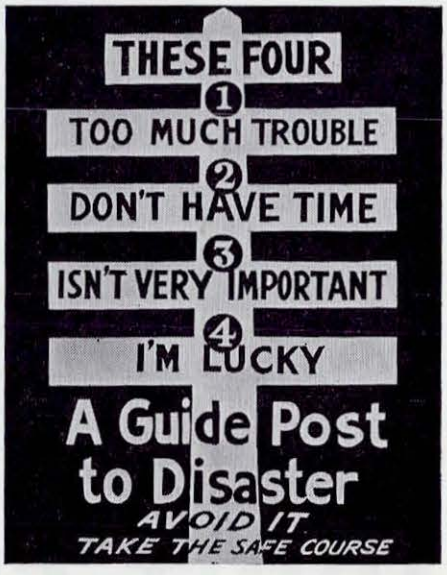
William E. Kearfott, division engineer of the Baltimore & Ohio, with headquarters at Punxsutawney, Pa., died recently in that city.

Addison R. Smith, who retired in 1945 as vice-president in charge of traffic of the Louisville & Nashville, died at his home in Louisville, Ky., on November 5. Mr. Smith had been a vice-president of the company for 40 years at the time of his retirement.

Simon James McLean, advisory officer, Board of Transport Commissioners for Canada, with headquarters at Ottawa, Ont., died in a hospital in that city on November 5 after a long illness. Mr. McLean was a member of the Board of Railway Commissioners for Canada from 1908 to 1938, serving as assistant chief commissioner from 1911 to 1938, then becoming advisory officer of the Board of Transport Commissioners.

George Wadsworth Feagin, former chief locating engineer of the Louisville & Nashville, died in Webster Groves, Mo., on August 5. Mr. Feagin was born in 1866 in Midway, Ala., and was graduated from the University of Alabama in 1886. He devoted virtually all of his professional career to the location and construction of railroads in the south. For over 30 years he was employed by the Louisville & Nashville until his retirement in 1937. He was a life member of the American Railway Engineering Association.

James A. Nichols, superintendent of the Indiana division of the New York Central, with headquarters at Indianaolis, Ind., died in that city on October 30, following a short illness. Mr. Nichols was graduated from Virginia Military Institute in 1905, and began his railroad career with the N. Y. C. in 1912, as a rodman at Mattoon, Ill. He later served on the Cleveland, Cincinnati, Chicago & St. Louis (part of the N. Y. C. System) as assistant engineer at various points. He entered military service in 1917, and was a captain during World War I. Returning to the road in 1919, he served in the engineering department until 1921, when he was made assistant trainmaster at Mattoon. In 1923 he was advanced to trainmaster at Anderson, Ind., and was transferred to Kankakee, Ill., in 1926. He remained there until 1942, when he was promoted to assistant superintendent at Indianapolis. He was appointed manager of the Union Terminal at Cincinnati, Ohio, in January, 1942, and in 1946 he returned to the N. Y. C. as superintendent at Indianapolis.



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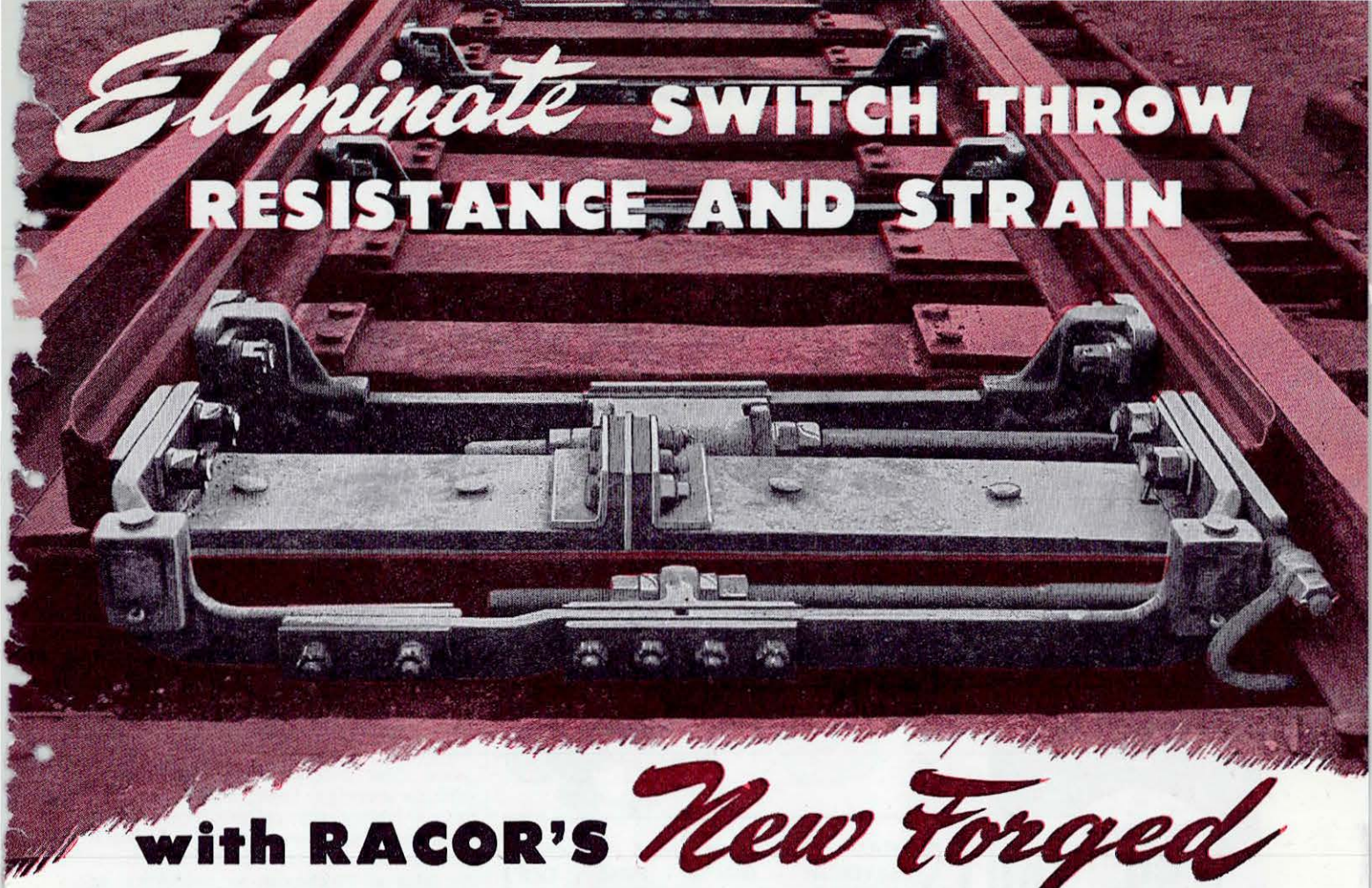

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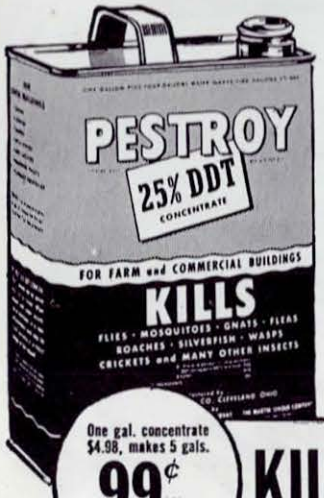

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Current Publications

PAMPHLETS

From Ox-Teams to Eagles; a History of the Texas and Pacific Railway. 50 pages, illustrations. Published by the Texas & Pacific Railway Company, Dallas 2, Tex. Free.

This little history of the Texas & Pacific serves a two-fold purpose—to answer requests for historical information about the railroad, and to commemorate its 75th anniversary.

Tabulation of Statistics Pertaining to Signals, Interlocking, Automatic Train Control, Telegraph and Telephone for Transmission of Train Orders, and Spring Switches as Used on the Railroads of the United States, January 1, 1946. 38 pages. Compiled by the Bureau of Safety, Interstate Commerce Commission, Washington 25, D. C.

Contains statistics for individual railroads on the above-mentioned subjects.

Quiz on Railroads and Railroading; 450 Questions and Answers. Published by the Association of American Railroads, Transportation Building, Washington 6, D. C. Free.

This is the fifth edition of this popular booklet which lists 450 questions frequently asked about American railroads, together with the answers to them. Subjects covered include history, physical properties, operations, accomplishments, and the role which the railroads play as transportation agencies, as fields of investment, as employers, as purchasers of the products of industry, and as taxpayers.

Statistics of Railways of Class I, United States, Calendar Years 1929 and 1936 to 1945. 13 pages. Published by the Association of American Railroads, Bureau of Railway Economics, Transportation Building, Washington 6, D. C. Free.

Contains statistics for the Class I railroads as a group on finances, revenues and expenses, freight and passenger traffic, equipment, taxes, freight and passenger operating statistics, fuel consumed by locomotives and rails and ties laid.

A Year Book of Railroad Information, 1946 Edition. 96 pages. Published by the Eastern Railroad Presidents Conference Committee on Public Relations, 143 Liberty St., New York 6, N. Y. Free.

Contains statistics for 1945 and several previous years on the railways' plant, service, rates, earnings, purchases, employees and operations. The figures, with a few exceptions, deal with Class I railroads.

Reduction of Loss and Damage in Rail Transportation of Fresh Fruits and Vegetables by Improved Loading Methods, by Philip L. Breakiron. 80 pages, illustrations. Published by Bureau of Agricultural Economics, United States Department of Agriculture, Washington 25, D. C. Free.

A partial summary of this report appeared in the July issue of the Bureau's publication, "The Marketing and Transportation Situation," and was commented on in the *Railway Age* of August 10, page 238. Copies of the complete report are now available.

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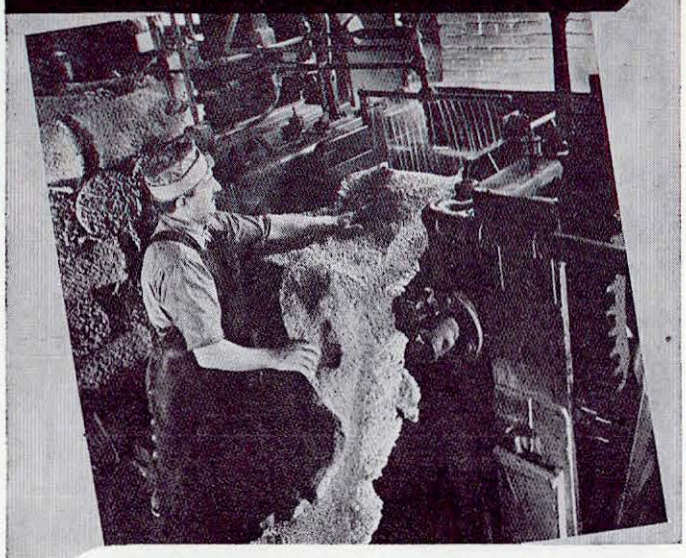

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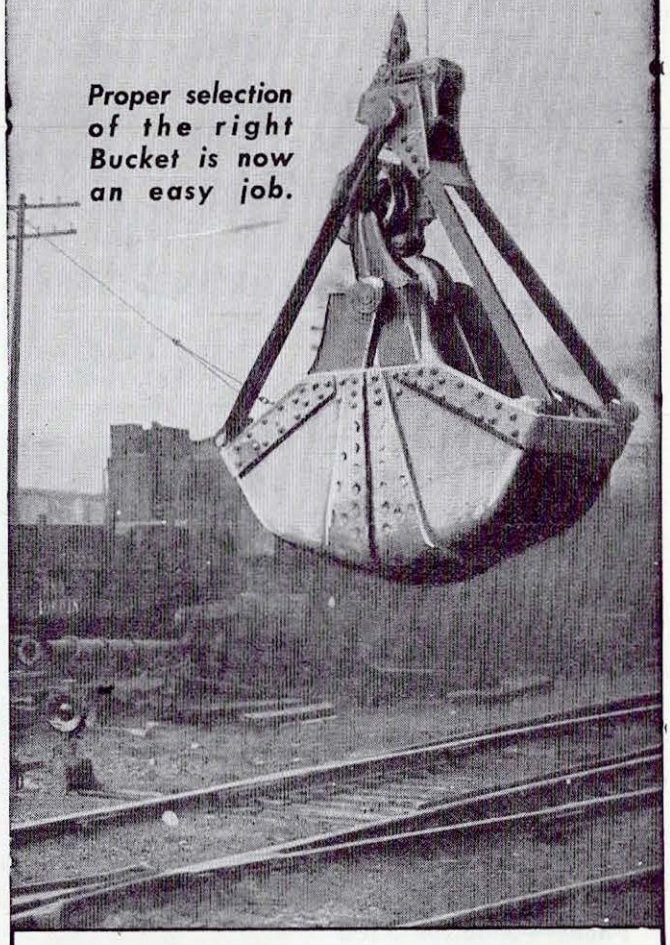

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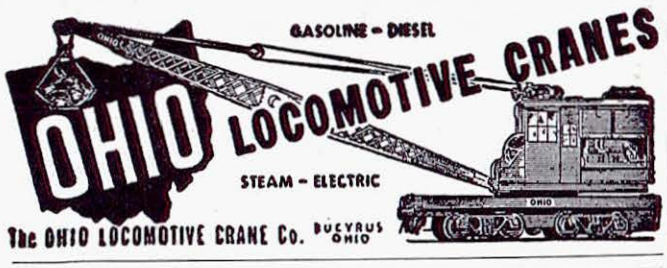

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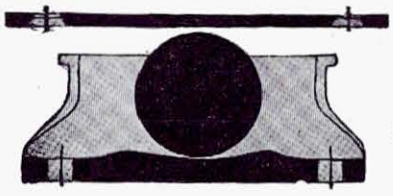

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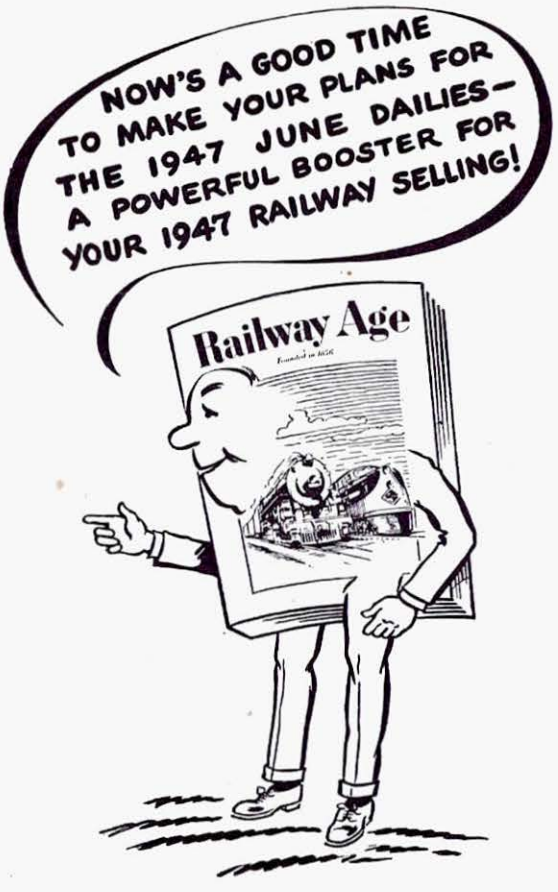
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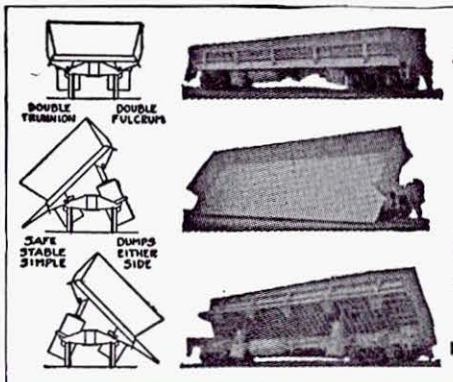

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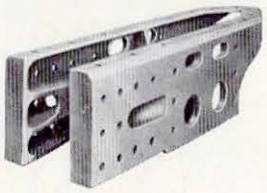

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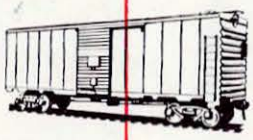

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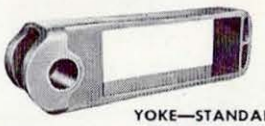

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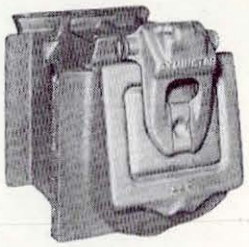

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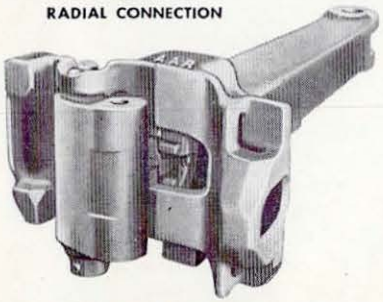

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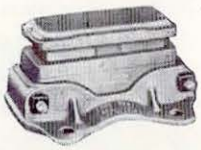

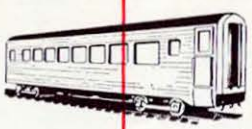

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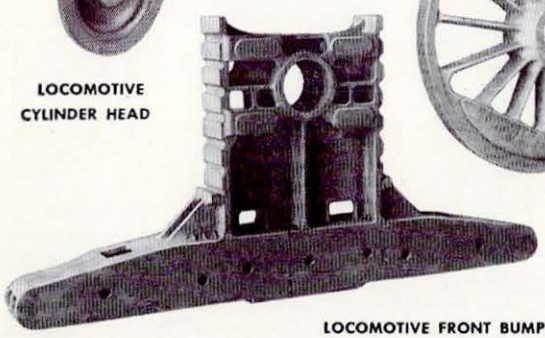

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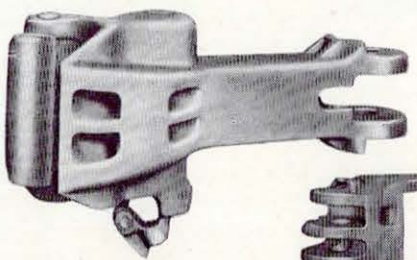

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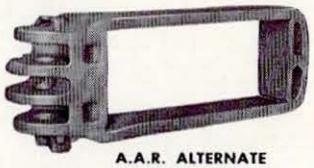

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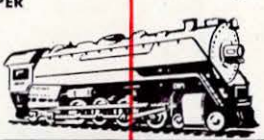


THE SYMINGTON-GOULD CORPORATION

Works: ROCHESTER & DEPEW, NEW YORK

New York • Chicago • St. Louis • Boston • San Francisco • *In Canada:* ADANAC SUPPLIES, LTD., Montreal, Que.

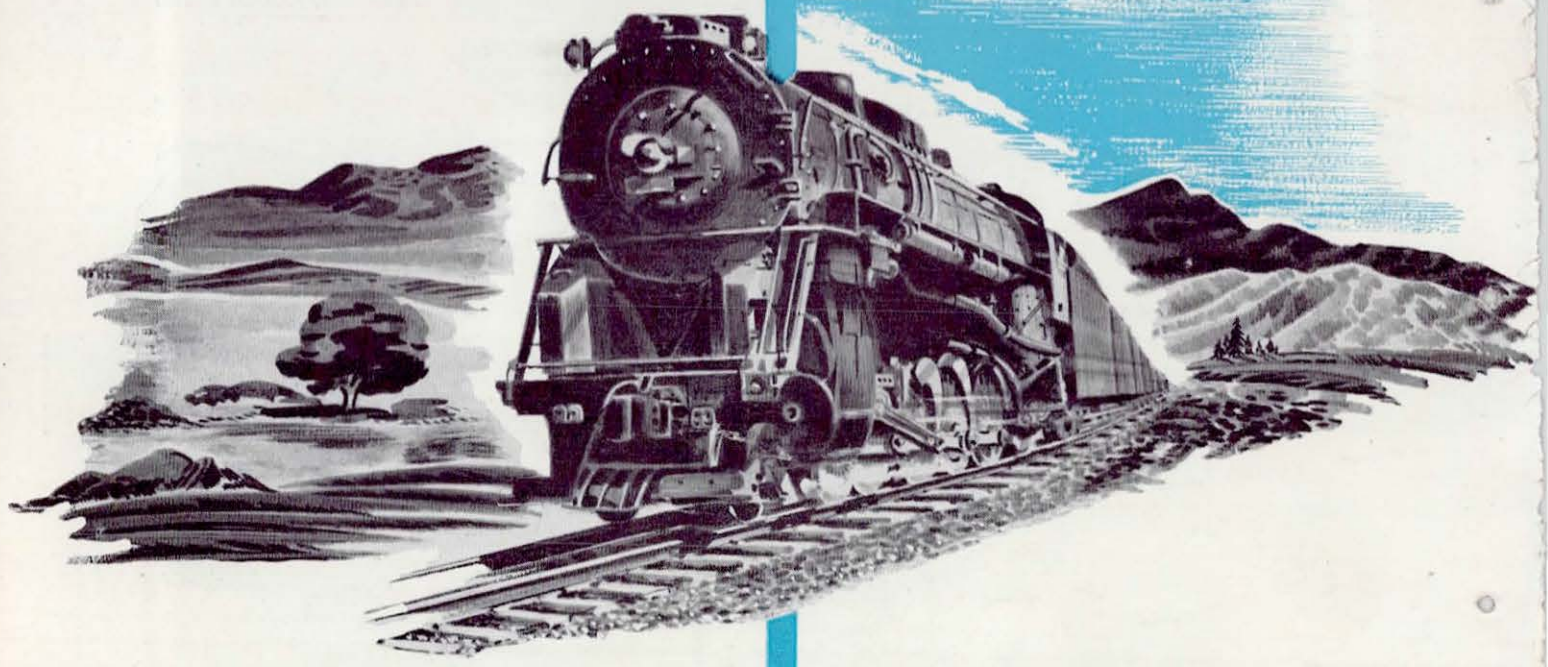
on the Southern

G-R-S remote control saves

coal — *At least one ton of coal is saved for each eastbound tonnage freight.*

water — *90 per cent of the water stops east of the yard have been eliminated.*

time — *From 20 to 50 minutes is saved on each eastbound freight . . . from 10 to 30 minutes on westbound freights.**



Time was when freights made long stops for trainmen to line up switches at the east end of the John Sevier classification yards on the Southern Railroad. Then, in 1940, the "Southern" installed G-R-S Remote Control Interlocking.

Train stops were eliminated. Coal and water were saved. Gross ton-miles per train-hour increased.

Possibilities for similar savings may exist at yard leads, junctions, or crossings on your road. At any rate, we'd be happy to make a study to determine exactly what you might expect from G-R-S Remote Control. You'd incur no obligation whatsoever!

General Railway Signal Company

A-2171

* *Railway Signaling, May 1940*

ROCHESTER 2, N. Y. • NEW YORK 17 • CHICAGO 3 • ST. LOUIS 1